

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. IX.

TORONTO, FEBRUARY, 1901.

NO. 2.

Original Contributions.

FURUNCLE IN EXTERNAL EAR.—NASAL OBSTRUCTION AND PARESIS OF SOFT PALATE.

BY PERCY G. GOLDSMITH, M.D., C.M., BELLEVILLE.

Furuncle in External Ear simulating Acute Suppurative Mastoiditis.—Female, aged 32; referred to me for a mastoid operation. The history briefly is as follows: For the last seven or eight years patient has had an intermitting running ear, with occasional attacks of earache of slight severity. On one occasion six years previously, had a swelling and queer pain behind the ear, which subsided under hot fomentations. Three weeks before I saw her she had a slight earache, with cessation of discharge and rapidly increasing deafness. The pain in the ear became very severe and continuous, most marked at night, and not particularly affected by moving the jaws. Marked swelling came on gradually with redness and edema over the corresponding mastoid, but lately has somewhat subsided. Marked constitutional disturbances were associated with the pain—sleeplessness (she had had no sleep for last two weeks), chills, fever and vomiting.

On inspecting the head and comparing the two mastoids from behind, together with the history, certainly in my mind settled the diagnosis. However, on completing the examination, I had reason to doubt my previously formed opinion. The meatus was very markedly swollen, and at the posterior superior wall, at the junction of the bony and cartilaginous meati, was a distinct bulging extremely tender to the probe, as was all the canal. I could not inspect the drum-head owing to the swelling. The mastoid

itself was extremely tender on pressure, though on more careful examination I found I could not increase the tenderness by pressing deeply in an anterior and downward direction, taking care not to move the meatal walls.

My diagnosis was one of three things: (1) Furuncle alone; (2) Furuncle and acute mastoiditis. (3) Acute mastoiditis. The patient's appearance and history pointed strongly to the latter. The note I made in my case-book was, "Suspect entirely furuncle; chloroform because of nervousness." Chloroform having been administered, I incised deeply into the tumescence on the posterior wall, and found a small quantity of intensely fetid cheesy pus. I could detect no roughened bone anywhere. Hemorrhage was quite free, and I encouraged this with a warm douche. Boric



gauze, soaked with glycerine, acid. carbol. dil., was gently inserted between the lips of the incision, and drops of the same given for frequent instillation during the next day. A warm compress of lotio acid. boric was applied over the front and back of the ear and changed every three hours. Two days following the operation I again saw the patient, when she informed me that she had had her first night's sleep for two weeks; pain and throbbing was all gone. The mastoid swelling was very materially reduced, while the tenderness was entirely gone. Her temperature was normal, and there had been an entire absence of chills. I removed the gauze and thoroughly cleansed the canal, and found the swelling so much reduced that the drum-head, showing an old perforation situated above and posterior to the umbo, could be easily made

out. Her hearing was now equal to what it was before this illness. I ordered the drops to be continued for a week, adding some spirit to them. Patient rapidly became well.

I report the case to show what grave constitutional effects may be caused by a little boil in the ear, and how easily it might appear a much graver affection.

Nasal Obstruction and Paresis of Soft Palate due to Myxofibroma of Naso-pharynx.—Male, aged 20; consulted me for inability to breathe through the left nostril, associated with regurgitation of fluids through the right nostril when swallowing. A muffled voice was most noticeable. The history was simply one of partial left nasal obstruction for four or five years, but for the last six months absolute inability to get any air through that nostril. There was also a nasal discharge from the left nostril most marked on bending forward, the discharge consisting of glairy mucus. Otherwise, personal and previous history have no bearing on the case.

On examining the interior of the nose, I found a large quantity of glairy mucus lying in the inferior meatus, and a markedly inflamed condition of the nasal mucous membrane. I cleared away all the mucus, and except for a slight deviation toward the left of the septum, nothing could be seen. The middle turbinal was not enlarged. With a post-nasal mirror, however, I easily discovered the trouble, which was a large, slightly pinkish-looking mass, almost completely blocking the naso-pharynx. The mass was easily movable, and did not bleed readily. The size and position of the mass readily accounted for the paresis of the soft palate. I thought the tumor would have to be removed through the mouth, but decided to try intra-nasal means first. Five per cent. cocaine was sprayed into the nose and post-nasal region. A snare, having a milled screw for gradual tightening, was selected, and the loop left quite long. Having inserted the snare and allowed the loop to fall into the pharynx, with my right finger I worked the loop around the growth and gradually drew the loop home. The growth being very flat was easily doubled on itself, and with some difficulty came out through the nostril. Hemorrhage was for a few moments very free, but rapidly subsided, leaving the nostril patent. On examining again next day with a post-nasal mirror the growth was seen to spring from the posterior end of the middle turbinal. Regurgitation of fluids rapidly stopped, and the patient experienced a very great deal of relief. The growth was extremely tough, and came away in one piece.

ELECTRO-THERAPEUTIC SINS.*

BY REV. H. NEWMAN LAWRENCE, STAPLETON, NEW YORK, N. Y.

SIN is the transgression of the law, therefore electro-therapeutic sins are transgressions of the laws of electro-therapeutics. These laws are many, for they embrace nearly all electrical laws, a large proportion of the general therapeutic laws and a number of special laws born of the combination of electricity and therapeutics. Any enumeration of these laws is beyond my province, would occupy too much time, and would partake somewhat of the nature of an insult to my hearers who are acquainted with them already.

The transgression of these laws may be either wilful or ignorant. Both may be classed as sins and, let me add, that there is such a thing as wilful ignorance, and this is perhaps the greatest sin of all.

Although I suppose that I am confined by the title of this paper to scientific sins, yet I cannot refrain from mentioning that electro-therapeutic laws are subject to the great moral law of right and wrong. In so far as the large majority of the members of this Association are physicians and surgeons, it is manifest that there is no need to say much about transgression of therapeutic laws. The diploma which each possesses from his *Alma Mater* testifies that he knows the laws; and the high ethical principles which distinguish the profession as a whole are evidence that he does not transgress them.

When, however, the physician comes to apply electricity to his therapeutics, the conditions are widely different. His diploma does not cover electrical knowledge. His regular course of instruction either did not teach him electrical laws, or only gave him a very meagre and imperfect acquaintance with them.

Herein lies a great temptation to electro-therapeutic sin. Shall he use electricity in his practice without first gaining a reasonably full knowledge of its laws? If he yields to such temptation he is clearly guilty of electro-therapeutic sin. His position would be analogous to a physician who had somehow obtained his diploma without possessing any knowledge of medicinal chemistry and then proceeded to not only prescribe medicines, but also to do his own dispensing. If an electrician presumes to prescribe and apply electricity to the human body when he is ignorant of thera-

*Read at the annual meeting of the American Electro-Therapeutic Association, New York, September 25th, 1900.

peutics, he at once meets and deserves the condemnation of the medical profession; but granted that he is a *bona fide* electrician, it seems to me a question of fine casuistry as to which is the greater sinner—the physician who practises electro-therapeutics without knowledge of electricity, or the electrician who practises electro-therapeutics without a knowledge of therapeutics.

When the busy physician finds it necessary to entrust the carrying out of the electrical prescriptions to an assistant, it is very necessary that he exercise due care that such assistant is qualified to carry out his instructions; otherwise, if not actually a sinner himself, he is at least “an accessory before the fact.”

Whatever may be said of science in the abstract, it is certain that applied science cannot be scientific unless that which is applied is measured. Electrical energy can be measured, and is, moreover, sold by certain units of measurement. The laws of electrical measurement are well known, so that to apply electricity to therapeutics without measurement is to be guilty of electro-therapeutic sin.

There are other kinds of sins which, though perpetrated under the name electro-therapeutic, are not really electro-therapeutic at all; but inasmuch as they cause great wrong to the public under cover of the name, it may be well to say a few words about them here. Belts and other body appliances bearing the name electric or magnetic and claiming to apply electricity to the body are, with scarce exceptions, frauds, and those persons who sell or recommend them are guilty of electro-therapeutic sin of the grossest kind. That these appliances violate all laws, electric and therapeutic, has been frequently pointed out, but as such exposures seldom get beyond the technical journals, the general public can hardly be said to be influenced by them. Still, as attention cannot be too strongly called to the matter, I will briefly re-state the main facts.

A very large proportion of the so-called electrical appliances are so badly constructed or so marvellously connected that they cannot by any possible chance or mischance produce electric currents. Some bear their own condemnation upon their faces, for they are announced as never wearing out and never requiring renewal.

The only way in which an electrical appliance can benefit the body electrically is by producing electrical energy capable of doing work upon the body, in the same way that an electric outfit must produce electric energy capable of doing work upon the bell, *i.e.*, making it ring. There must be a source of energy in the apparatus, and that source requires to be renewed from time to time, as the energy produced by it becomes exhausted. In other words, we must have an electric battery, and the electric battery which will never wear out nor run down, as it is called, has yet to be

discovered. Science says clearly and definitely that energy can not be created; it may be transformed, changed in character—as from chemical to electrical in the galvanic battery—but it cannot be obtained or created from nothing. Any electrical appliance, therefore, which professes never to need electrical renewal is a fraud.

Let us take an illustration from the typical electro-magnetic appliance. We have one or two or more strips of magnetized steel sewn into garments or bands, and we are told that the presence of these magnets causes electrical currents to be produced in the body. Now, while it is quite true that electric currents may be produced in a conductor which is in proximity to a magnet, it is also true that in order to do this one of the two must be moved relatively to the other. Either the magnet must be moved relatively to the conductor or the conductor must be moved relatively to the magnet; without such motion no current can be set up in the conductor. Were it otherwise there would be no need to employ large steam engines or water-wheels, or seek the power of Niagara Falls to drive dynamos for the production of large currents for electric light and power purposes. All that would be necessary would be to place magnets near the conducting wires, and then to draw off all the electrical energy required. The absurdity of such an idea is apparent to every one, and yet when it is put forward in connection with body appliances many are willing to accept it without question or thought. The body, which is here supposed to be the conductor, when it moves carries the magnet or magnets with it, and there is no relative motion of either one to the other. There is no energy expended in the appliance, and consequently no possibility of any electrical influence upon the body. It would be just as reasonable to place a hammer and nail together, and expect the latter to be driven home without any movement of the former, *i.e.*, without any expenditure of energy.

While on the subject of electro-magnetism it may be well to refer to the fact that magnetism alone has been said to influence the body. Against this assumption (in favor of which not one iota of physiological proof has ever been offered), we have the carefully carried out experiments of Kennelly and Peterson (*New York Medical Journal*, Dec. 31, 1892), who, throughout a long series of tests, found not the slightest evidence of physiological action, even when their subjects were placed in very strong magnetic fields.

Further, the startling claims of Dr. Luys, in Paris, as to the curative influence of magnets, were shown by Dr. Hart (*Popular Science Monthly*) to be based on psychological effects alone, equally good results being obtained from dummy magnets of wood, etc. In fact, the suggestion was everything and the fact nothing.

Other appliances and devices are to be found which differ from the above only in the point that they do not claim magnetic action. They profess in some other way to do electrical work without any provision for the production of electrical energy, or they are said to act in some hitherto unknown manner, which even their vendors do not attempt to explain, but lead the public to suppose the "action" to be electrical, because they use the word electric or electro as a title. An apparatus of this type has recently had a large sale both in America and in England. Its vendors have never (so far as I know, and I have questioned them myself) attempted to explain the action claimed for it. Nor can they, for the whole idea is an outrage upon the well-known and oft-proved laws of physics and physiology. Yet this thing is sold freely at more than a hundred times the cost of its materials, and some people who claim to be apostles of light and leading do not hesitate to openly praise and recommend it.

I will pass on to those devices which are, perhaps, more difficult to deal with because there is a germ of truth in them. I mean those appliances which are capable of producing electrical manifestations under certain conditions. Now what are the conditions under which electricity may influence the body, *i.e.*, do work upon it? Physiologists tell us that the properties of galvanic or continuous electric currents which can influence the body structures are the electrolytic, the thermal, and the cataphoric—electrolytic, by means of which the fluids of the body are decomposed or broken up into their constituent parts; thermal, by means of which the temperature is raised, either locally or generally; and the cataphoric, by means of which substances in solution are passed without chemical change from one part of the circuit to another.

To produce these effects we must have a current which can pass through the body or that portion of it which it is intended to influence. The body offers considerable resistance to the flow of an electric current, and consequently any current must possess a proportionate amount of electric pressure, or electromotive force, as it is called, before it can overcome that resistance, pass into, and do work upon the body. The state of affairs is somewhat similar to that under which a bullet, when simply pressed or thrown against a door, fails to pass through it, but when fired from a pistol, by reason of its velocity or pressure, not only passes through it, but is capable of doing work on the other side. Going a step further, we may point out that, supposing the door to be very thick, or have iron sheeting over it, an ordinary pistol would fail to pierce it, but that a bullet from a more powerful gun would easily succeed. For electrical purposes the body may be said to be protected by a semi-proof sheeting (the skin), which can only be penetrated by currents possessing considerable pressure on

account of the resistance which it offers. It would occupy too much time and space to go fully into the consideration of the resistance of the human body. Many authorities have found the value of this resistance under various conditions, but until quite recently no measurements taken under belt conditions had been recorded. Those who have never tried such measurements can not fail to be astonished at the high resistance of the body under these circumstances.

A short time ago I measured it on several people, using for the purpose a belt which had just been purchased at one of the large establishments for the sale of such commodities. The average resistance was 800,000 ohms. As this particular belt had rather small discs, I will assume that the figures may be less with others whose contact discs are larger or differently arranged. Let us be charitable and call it a half, *i.e.*, 400,000 ohms. To pass even the tenth part of one milliampere through such resistance requires (by Ohm's law) 40 volts, and this is at least 40 times more than the best of such belts is capable of. This view of the resistance of the body under the belt conditions has also been proved by Dr. W. S. Hedley (*Provincial Medical Journal*), and by expert evidence given at the famous Harness belt trials which occupied the English law courts at intervals during the autumn of 1892 and spring of 1893 (*Electrical Review*).

Such being the resistance, let us see how we arrive at the conclusion that 40 volts is 40 times more than such belts are capable of producing. Every belt which depends upon the moisture of the body for its action can not produce a higher electromotive force—electric pressure—than that of one couple of the elements of which it is composed, because all the elements dip into the same electrolyte (the body moisture), and can not, therefore, be connected in series. There may be many elements, but the fluid of the body can not be separated off into cells. It is all in one containing vessel, so to speak, and the only effect of increasing the number of the couples is to practically increase the size of the plates of similar metal.

As electromotive force depends only upon the electrical difference between the metals used in the same exciting fluid or electrolyte, it follows that the total electromotive force of these couples, be they few or many, is only that of one couple. The couples used in these belts are nearly always copper and zinc, and their maximum electromotive force in the presence of such fluids as body moistures is less than one volt (*Electrical Review*).

So far, then, we have an arrangement that may give one volt and which has to act upon a resistance of 400,000 ohms. This, by Ohm's law, will give a possible current through the body of one-fourth of a thousandth part of one milliampere, an infinitesimal

fraction of the smallest current (one milliampere) recognized by electro-therapeutists; too small for any but the theoretical mathematician, and less than may be obtained by dipping a needle and a pin in a spot of ink (*Electrical Review*).

The belt vendors sometimes try somewhat to trim their sails to the wind, and declare that their devices are intended only to generate small currents, and that their infinitesimal possibilities may prove useful to the body if the time factor is taken into account; that a small electrical influence applied for a long time is equivalent to a greater influence applied for a proportionally shorter time. Imagine having to wear a belt four thousand hours (nearly six months) before the effect of even one milliampere hour could be obtained!

In conclusion, I wish to speak of yet another class of electro-therapeutic sins—*viz.*, Testimonial sins. Here the cultured and the educated, outside the medical and electrical circles, are largely to blame; and conspicuous, if not chief, among these sinners are the clergy. We, of the clergy, are bound to make faith one of the chief factors of our teaching and our practice, but it is, or should be, faith in the truth. This for the pulpit, but in practice how often do we find that blind faith is put in all sorts of outlandish things, especially in the nature of body cure-alls, without any effort being made to discover the truth concerning them. In this way some of the vilest electrical quackery has received not only the approval, but also the public recommendation, of men whose position as ministers of the Gospel gives them considerable influence over suffering humanity. Surely the clergy above all others should avoid this sin, remembering that "blind unbelief is sure to err," and that scientific truth should be sought for and can always be found.

RHUS GLABRA IN ENURESIS.

BY J. J. CASSIDY, M.D.,

Consulting Physician Toronto General Hospital.

THE internal use of rhus glabra will prevent incontinence of urine. Butler ("Text-Book of Materia Medica, Therapeutics and Pharmacology") says of this drug that "a dose of 10-30 drops of the fluid extract, taken two or three times daily, has produced complete temporary suspension of nocturnal enuresis of children, as well as senile enuresis." The action of rhus glabra resembles that of tannic acid. Krameria, another vegetable astringent, has also been used in incontinence of urine. The astringent action of rhus is probably exercised on the bladder, while the drug which is present in the urine, comes in contact with that viscus. When the contact is repeated every day for a considerable time, important changes may be produced in the mucous membrane of the bladder, and the habit of enuresis broken up. Whether this contention be true or not, it is a matter of observation that a brief employment of the drug, which cannot cause an important change in the vesical mucosa, though efficient for a time, is followed by a relapse. The following cases, which occurred in my practice last year, seem to emphasize the view that long-continued use of rhus glabra is the important element in the enduring cure of enuresis.

From February 23rd to June 24th, 1900, three lads, of ages ranging from twelve to fourteen years, were treated by me for enuresis. The details of the treatment were carried out by the infirmarian of the institution in which they boarded. Each of the lads had, at different times, received medical treatment from other physicians prior to coming under my care. The lads were not sickly-looking, and took active exercise. Two of them were undersized for their age and were of the nervous temperament; the third, who was well grown for his age, was of the lymphatic temperament. Prior to my taking charge of them the only treatment pursued at the institution had consisted in restricting the amount of fluid taken at night, and in making the lads arise from bed every night about 11 p.m. in order to urinate. These precautions, however, had proved unavailing.

The prescriptions used were as follows:

R. L. Citratis	gr. 160
Syrupi Calcii Lactophosphatis.....	}āā 5ij.
Syrupi Cascare Aromatici.....	

M. Sig.—A teaspoonful after dinner (noon).

R Extracti Rhois Glabræ Fluidi..... ℥ 320
Syrupiq. s. ad. ʒij.

M. Sig.—A teaspoonful at bedtime.

This treatment was continued regularly from day to day and without intermission during the months of March, April, May and June, 1900, the lads being in good health and free from their complaint. During the months of July and August the treatment was discontinued, and has not been resumed since. In December, 1900, and in January, 1901, two of the lads were treated for influenza, one of them having broncho-pneumonia; but in neither case did enuresis reappear. The third lad I did not see, as he did not return to the institution.

The conclusion is obvious, therefore, that in two of these cases and probably in all three, rhus glabra produced more than a temporary effect. My explanation is that this remedy was given regularly for four months, and the cure resulted largely from the continued action of the vegetable astringent on the vesical mucosa, and particularly the fibres of the sphincter vesicæ. The use of iron as an adjuvant to rhus is important; but, the mineral being incompatible with a vegetable astringent, it was given in a separate prescription. Though the blood-count was not made, the appearance of the labial and ocular mucosæ in these cases indicated, that an iron tonic would be useful. Syrup Cascara Aromatic was combined with it to overcome its constipating action.

The syrup of the lactophosphate of lime is useful in relieving atonic and irritative dyspepsia, which in some cases of enuresis may be responsible for a disordered and irritating condition of the urine, such as lithemia and oxaluria. The restoration of the urinary secretion to a normal condition tends to make the bladder more tolerant, and thus by lessening irritation of the vesical mucosa promotes the cure of enuresis. All the authorities say that rhus should be given three times a day, and iron is usually given as often. Each of the mixtures I ordered was given once a day, so that in my cases the results were as favorable as they could have been if they had been used more frequently. The treatment was also carried on with no friction between the patients and the infirmarian, it being an easy task to get the boys to take a palatable tonic once a day after dinner, and the specific medicament at bedtime.

Whatever the rationale of cure may have been, these medicines proved successful in three relapsing cases of enuresis, and two of the patients, to my certain knowledge, remain cured.

AMONG THE TOMES.

BY W. A. YOUNG, M.D., L.R.C.P.(LOND.), TORONTO.

THE twentieth century has dawned pregnant with the promise of wonderful advancement; the nineteenth century has died famous, achievement writ large upon its epitaph. It is not strange that the prevailing pose of the moment seems to be looking backward, and recapitulating what has been attempted, what done, during the earlier number of the hundred years just gone by. Interested, of course, in medical journalism, it was but natural to seek and find copies of the first Canadian and first American medical journals published on this continent.

In the fine old Surgeon-General's Library at Washington, D.C., prowling around and spending many a pleasant hour, we came across original copies of both the sought-for magazines.

The first Canadian medical journal was called the *Journal de Medecine de Quebec*, published by Xavier Tessier quarterly, January, 1826, to April, 1827; octavo size. It was more familiarly called the *Quebec Medical Journal*. The articles were alternately in French and in English. The opening editorial announcement we quote verbatim:

"It might have been expected that we would have devoted this part of our labor to the critical analysis of the many and voluminous works which daily make their way into the medical world, signaling and commenting on those parts where the author has the merit of invention or improvement, and at the same time pointing out those ideas which are only founded upon speculative arguments or a superficial investigation of facts; but it is our intention to undertake such an arduous task when our publication shall from its general circulation afford us the means of increasing its number of pages which at present would not admit of such an extensive plan.

"On the other hand we consider it as more intimately connected with our intention to give a short and concise view of the improvements which have lately taken place in the various branches of Medical Science; and it is with a view of attaining this end that we shall for the moment confine ourselves to the analysis of the most interesting articles in the European and American journals.

"The *London Medical and Physical Journal*, a work to which this country is particularly indebted for the most accurate practical information, is the first which we shall peruse. The next

will be the *Edinburgh Medical and Surgical Journal*, whose fame is too universally established to need any comment; and after having given our attention to the French journals, and particularly to the celebrated *Journal de Majendie*, we will turn our regards towards our neighbors whose rapid improvements in science have acquired too high a consideration not to be read with a particular interest to this country. We will follow the same order with regard to other journals equally interesting.

"In order to give our readers in this Province a more complete idea of the progress of science since a few years, we will begin our analysis by the year 1823. Our second number will embrace 1824; the third, 1825; and the fourth, 1826. This will bring us to 1827, when we will follow the science more closely; and if we can reasonably anticipate that a favorable crisis will turn toward the advantage of the profession, those divisions which have too long prevailed amongst the medical gentlemen of this country, we have no doubt that Canada will soon be able to contribute its share to the improvement of medical science." (Editor.)

Amongst the articles in English which appeared in the first number of this old and interesting publication were:

1st. An extract from the *London Medical and Physical Journal*, Vol. XLIX., 1823: "Practical Observations on Distortions of the Spine, Chest and Limbs; together with Remarks on Paralytic and other Diseases connected with Impaired or Defective Motion," by Wm. Ward, F.L.S.

2nd. "A Treatise on Dislocations and on Fractures of the Joints," by Sir Astley Cooper, Bart., F.R.S., Surgeon to the King.

3rd. "On the Use of Carbonate of Iron in Tic Douloureux," by Dr. Stewart Crawford and Anth. T. Thompson, Esq.

4th. "New Method of Performing the Operation of Lithotomy in the Female," by Dr. Liseranc (*Journal Universel*, Fevrier, 1823).

Then followed some quarterly hospital reports, showing the number of patients admitted into and discharged from Montreal General Hospitals from February 1st to May 1st, 1825; from May 1st to July 31st, 1825, and from the 29th July to 28th October, 1825.

The medical officers during that time, and between these dates, were Dr. Caldwell, Dr. Robertson, Dr. John Stephenson, and Dr. A. F. Holmes. The number of indoor admissions from February 1st to May 1st were but 83, of whom they claimed 79 were discharged "cured" of the 83 admitted. The cause most prevalent was inflammation of the lungs in 9; catarrh 10; ulcers 7; compound fracture 5. We notice that during the following quarter out of 223 admissions, 79 suffered from continued fever; 14 from

rheumatism, and 10 from diarrhea. Then follow some reports from the Quebec Emigrants' Hospital. At this date it was evidently common to publish each quarter a meteorological table of the atmospheric variations, as in this journal we noticed a daily meteorological report of the winds and the atmospheric variations for the three months of October, November, and December, 1824. On the back of the first cover of the first issue of the *Quebec Medical Journal* appeared the following:

CONDITIONS.—“This Journal will appear quarterly, commencing by the month of January, and will comprehend for the present 64 pages. The price will be 20 shillings per annum, payable every six months, the first payment to be made after the delivery of the first number and the second after that of the third. The delivery of the first number will not bind the person to whom it shall be delivered. All communications relative to the various branches of the medical profession will be gratefully received, being addressed, free of postage, to The Editor at Quebec, No. 4 Notre Dame Street, near the Lower Town Market Place.”

The typography was remarkably clear, and the *Journal* a creditable and readable production, a fine example and a good headline copy for those who coveted a place among medical journalists in the years to come. We take the liberty of appending a list of the medical magazines started in Canada, but alas, like the good, they died young.

MEDICAL JOURNALS PUBLISHED IN CANADA NOT NOW IN EXISTENCE.

Abeille (L') Médicale. Journal de l'Ecole de Médecine et de Chirurgie de Montreal, de l'Hôpital Hotel Dieu, de la Maternité Ste. Pelagie et des Dispensaires. Publication mensuelle. Thos. E. d'Odet, d'Orsonnens, rédacteur-en-chef. Vols. I.-III.; No. 1, Vol. IV. January, 1879, to January, 1882. 8vo. Montreal.

The British-American Journal of Medical and Physical Science. Edited by A. Hall and R. L. Macdonnell. Monthly. Vols. I.-V. April, 1845, to April, 1850. 4to. Montreal. Continued as *The British-American Medical and Physical Journal.* Conducted by same editors. May, 1850, to January, 1852. 8vo. Montreal.

The Canada Health Journal. Edited by Cl. T. Campbell. Nos. 1-5, Vol. I. January to May, 1870. 8vo. London, Ontario. (Ended.)

The Canada Medical Journal and Monthly Record of Medical and Surgical Science. Edited by R. L. Macdonnell and A. H. David, and later by G. E. Fenwick and F. W. Campbell. Vol. I. March, 1852, to June, 1872. 8vo. Montreal. (Ended.)

The Canadian Journal of Homeopathy. Edited by W. A. Greenleaf and A. T. Bull. Monthly. Nos. 3, 8, 10, Vol. I. March, August and October, 1856. 8vo. St. Catharines. Nos. 8 and 10 were published in Hamilton.

The Canadian Medical Times. A Weekly Journal of Medical Science, News and Politics. Edited by Jas. Neish. Nos. 1-26, Vol. I. July 5th to December 27th, 1873. Kingston.

The Dominion Sanitary Journal was the title of *The Sanitary Journal* in October, 1883, to July, 1885. Vols. VI., VII.

Gazette Médicale. Revue mensuelle, Medico-chirurgicale. Rédacteurs-propriétaires, A. Dagenais and Dr. Lemire. Vol. I. August, 1865, to July, 1866. 4to. Montreal. (Ended.)

Le Guide Sanitaire. Journal d'Hygiène pratique réd. par un comité de collaborateurs; paraissant tous les mois. No. 1, Vol. I. November, 1874. 8vo. Montreal. (Ended.)

Health and Home. A Journal of Sanitary Science and Home Hygiene; also, the official organ of the Canadian Sanitary Association and a Dominion Record of Vital Statistics. Manager and editor, Fred. N. Boxer. Monthly. Nos. 1-3, Vol. I. February to April, 1884. 8vo. Montreal.

La Lancette Canadienne. Journal medico-chirurgical, publié à Montreal, par le docteur J. L. Leprohon. Semi-monthly. Nos. 1-3, 11, 12, Vol. I. January 4th, to June 15th, 1847. Montreal. (No. 12 last published.)

The Medical Chronicle; or, Montreal Monthly Journal of Medicine and Surgery. Edited by Wm. Wright and D. C. MacCallum. Vols. I.-VI. June, 1853, to May, 1859. 8vo. Montreal. (Ended.)

The Ontario Journal of Health. J. F. Latimer, editor and publisher. Monthly. No. 1, Vol. I. April, 1877. London, Ont.

The Provincial Medical Journal. Edited by W. B. Slayter, E. Farrell, R. W. McKeaguey. Quarterly. Nos. 2 and 3, Vol. I. August, November, 1868. 8vo. Halifax, N.S.

Public Health Magazine and Literary Review. Edited by Geo. A. Baynes, Monthly. Vols. I. and II. July, 1875, to June, 1877. 8vo. Montreal.

The Sanitary Journal. Devoted to Public Health. Edited by Ed. Playter. Bi-monthly. Vols. I.-X. July, 1874-83. 8vo. Toronto, 1874-83; Ottawa, 1883-88. In September, 1880, title became *Canada Health Journal*; in June, 1883, title became *Sanitary Journal*; in October, 1883, title became *Dominion Sanitary Journal*; in September, 1886, title became *Canada Health Journal*; in July, 1888, title became *The Health Journal*.

L'Union Médicale du Canada. Revue medico-chirurgicale paraissant tous les mois. Rédacteur-en-chef, J. P. Rottot; assistant rédacteurs, A. Dagenais and L. J. P. Desrosiers. Vols. I.-XV., 1872-86. New Series, Vols. I., II., 1887-88. 8vo. Montreal. Edited successively by Geo. Grenier, E. P. Lachapelle, A. Lamarche and H. E. Desrosiers.

The Upper Canada Journal of Medical, Surgical and Physical Science. Conducted by E. M. Hodder, Jno. King, Jas. Bovell, L. O'Brien and H. Melville. Monthly. Vols. I.-III. April, 1851-54. 8vo. Toronto.

Our curiosity satisfied and proud of Canadian brains and enterprise, we turned the eyes behind our specs to the land of the Stars and Stripes. In a book, "A Century of American Medicine" (1776-1876, by Edward H. Clarke, Prof. of Materia Medica in Harvard; Henry J. Bigelow, M.D., Prof. of Surgery in Harvard; Samuel Gross, D.D., LL.D., M.D., D.C.L., Oxford, etc., and several other distinguished men of the time. The work was published in Philadelphia by H. C. Lea in 1876.) Dr. Billings says: "The original, or first wholly American medical journal, was a

quarterly, *The American Repository*, edited by S. L. Mitchell, Edward Miller, and E. H. Smith, and published at New York from 1797 to 1824. That this met an existing want is shown by the fact that the demand for the earlier volumes was sufficient to warrant the issue of a second edition of the first and second volumes in 1804-5."

Dr. E. H. Smith, the projector of this journal, was born in Connecticut 1771, and died 1798. Although so young, he had edited several works, and contributed to literary periodicals as well as to his own medical journal.

Dr. S. L. Mitchell, 1764-1831, graduated at Edinburgh in 1786. As Professor of Chemistry and Natural History in Columbia College, and from 1820 to 1826 of *Materia Medica and Botany*, chief editor of the *Medical Repository*, representative in Congress in 1801-4, and 1810-13, and United States Senator 1804-9, he lectured and wrote upon almost all subjects, and his papers are scattered through various periodicals at home and abroad. He was rather a naturalist than a physician, and has very properly been called a "chaos of knowledge."

Dr. Edward Miller (1766-1812) was a native of Delaware, and a graduate of the University of Pennsylvania in 1789. In 1807 he accepted the chair of the practice of physics in College of Physicians and Surgeons, and in 1809 was appointed one of the physicians to the New York Hospital. His writings were collected and published in one volume in 1814, the most important being his papers on yellow fever.

The idea of the publication of the *Medical Repository* was probably taken from the *Annals of Medicine* of Duncan, a continuation of the *Medical and Philosophical Commentaries of Edinburgh*, and of which the *Edinburgh Medical Journal* of the present day is the successor. Although, owing to the tastes of Dr. Mitchell, it contains many dissertations which are now obsolete, the entire set of twenty-three volumes is even to-day well worthy of a place in the physician's library. At the close of its career its subscribers passed to the *New York Medical and Physical Journal*, and from that time New York City has never been without a medical journal.

To peruse the pages of the first volume of the *Medical Repository*, published now more "than a century gone to-day," inspires respect and almost reverence for those who with their enterprise, and in dignified English, took upon themselves the responsibility of becoming the great-grandfathers of medical journalism. Let us look at the compilation of the journal. First, a circular letter to the profession. The first article of introduction consists of a Medical Essay—the first of a series. Section 1, the Plague of Athens. In it are cited several stanzas of a poem called "Works

and Days," by Hesiod. Section II. contains a dissertation on "Whether the plague was imported or of local origin," ending with the assertion of the similarity of the disease with the fevers existing in America, in these words: "The history of the Plague of Athens, now concluded, offers so many points of resemblance both in nature and origin to our own fevers, that we may be justified in declaring it to have been in all essential particulars the same disease. A minute comparison, should it display minute dissimilarities, could scarcely fail of presenting as many minute similarities, and a due consideration of every circumstance cannot but impress the mind with a deep conviction of the unity of cause, in ages so remote."

Article II., entitled "Remarks on Manures," consists of about 20 pages. Article III., "Doctor Morton's Summary of the History of the Continued Fever in England from 1658 to 1691. Translated from the original Latin for the *Medical Repository*." Article IV., Remarks on "The Cholera or Bilious Diarrhea of Infants," by Dr. Miller. Article V., "The Speech of Foureroy in the Council of Ancients, delivered in the Session of the 10th of Ventose (February 28th, 1797), on "The Resolution Relative to Powder and Saltpetre Manufactories," translated from the *National Gazette or Universal Monitor* of the 5th of March, 1797, for the *Medical Repository*. Then comes the department entitled *Review*, with the head-note: "Under this title it is intended to include a review not only of late medical publications, strictly so-called, but also of all such publications concerning agriculture and other branches of natural history, natural philosophy, etc., as may in any wise relate to the objects contemplated in the plan of the *Medical Repository*." The books are exhaustively reviewed and considered line upon line and precept upon precept. In the first volume they consist of "Medical Inquiries and Observations," by Benjamin Rush, M.D., to which is given six pages, and is "to be continued."

2. "A Memoir concerning the Fascinating Faculty which has been ascribed to the Rattlesnake and other American Serpents," by Benjamin Smith Barton, M.D., etc. To this publication is devoted 8 1-2 pages.

3. "Medico-Chymical Dissertations on the Causes of the Epidemic called the Yellow Fever, and on the best Antimonial Preparations for the use of Medicine," by a physician signed "Practitioner" in Philadelphia. To the review of this work 6 pages are devoted. Then, under the department "Medical Facts, Hints and Inquiries," are briefly discussed "Inoculation," "Carbon," "Syphilis," "Syphilis and Fever," and signed E. H. S. Then a table entitled "Meteorological Observations for January, 1797, made by Gardiner Baker in the Cupola of the Exchange in the

City of New York." Then follows a table of patients admitted to the New York Hospital from January, 1797, to July 1st, 1797, with a list of diseases. Evidently the most fashionable (!) diseases of that time were syphilis, rheumatism and pneumonia. The number received from January to July was 209, and 152 were cured. Then a department entitled "Medical News," including intelligence concerning Medicine, Natural History, Agriculture, etc., both Foreign and Domestic, all information being "respectfully solicited." The "appendix" comprises letters under the headings "Domestic and Foreign," and circular letters telling of the virtue of medical properties, one in praise of the vapor of vitriolic ether in cases of phthisis pulmonalis. With this closes the first number of the first original medical journal in the United States—a splendid production, worthy its name, a monument to its editors and its century, and a compliment and a chart to its great-grandchildren, the medical journals of the twentieth century, who alas, in many instances, are new grafts on the family tree, and have neither the comely features nor the stately quill of their grandfather. Would that they even had inherited "gran'ther's clog," for the first medical journals were fittingly attired.

Public Health and Hygiene.

... IN CHARGE OF ...

J. J. CASSIDY, M.D., AND E. H. ADAMS, M.D.

HISTORY OF THE PROGRESS OF PUBLIC HEALTH DURING THE CENTURY—1800-1900.

BY PETER H. BRYCE, M.A., M.D., TORONTO.

(Continued.)

1. THE PERIOD OF INVESTIGATION.

The opening year of the century is notable because of the establishment in London of the Royal Institution, originally conceived as an establishment for the benefit of the poor. This institution has a special claim upon the interest of this Association, since its foundation was due to the efforts of Benjamin Thompson, afterwards Count Rumford, a Royalist American, who, going to Europe after the Revolution, had engaged in various services in different countries. His labors were in the field of philanthropy, where he specially endeavored to have science applied to domestic economy, and particularly for having cheap foods supplied for the needs of the poor in London and other large cities. It was intended to institute a system of popular lectures in order that a practical knowledge of inventions and of the means of obtaining the comforts and conveniences of life might be rapidly diffused. Humphry Davy, then a budding natural philosopher, was fortunately appointed first lecturer on chemistry, and succeeded in a remarkable way in interesting the public in his discoveries and in popularizing science in England. A lecturer of marvellous power, he traced out in the introductory lecture of 1802 the resources of science for humanity, and dealt upon its dignity and nobility as a pursuit, and upon its value as a moral and educational force. The lecture created a sensation, Davy became the lion of fashionable society, and for thirteen continuous seasons gave lectures on many and most varied subjects, from "laughing gas" to the constituents of artificial manures for agricultural purposes. But most to be remembered is that invention, the miner's safety lamp, the result

of a few months' experiment, which he had undertaken at the request of those specially interested in coal-mining. Seldom if ever has the sanitary value of a single invention been so quickly appreciated, and its benefits so strikingly illustrated; and yet when asked to patent the discovery, Davy wrote: "I never thought of such a thing; my sole object was to serve the cause of humanity."

In addition to the number of splendid workers whom Lavoisier left behind him in Paris, as Laplace, Fourcroy, Guyton de Morveau, Gay Lussac, Berthollet and Humboldt, England possessed other investigators, who, if not popularizing science, were perhaps adding, even more than Davy, to what has proved of extended permanent value. Of these, as the scholarly physician and conscientious investigator, was Dr. Wollaston, who, regardless of money, devoted himself in 1801 to pure chemistry, and was among the first to begin its application to physiology. He made platinum invaluable and gave us the theory of chemical equivalents; dipped into electricity, and came to be regarded as the greatest master of pure chemistry of his time. He died in 1828.

Alongside with his work must be placed that of the Quaker schoolmaster, Robert Dalton, since his work was especially in that branch which we now call chemical physics. His chief work was done in that centre of industry, Manchester. He has been called the father of modern meteorology, and did more to establish the laws of gases or elastic liquids than any who had preceded him. He it was who first pointed out that aqueous vapor was mechanically combined in the atmosphere, and that each gas therein is subject wholly to its own laws. His experiments on dew and moisture were wholly new, and he gave us the earliest definition of the "Dew Point." He pointed out that fluids could conduct heat as well as convey it by convection, and demonstrated the important fact of heat being produced by mechanical pressure of air, and cold by its rarefaction. He likewise demonstrated that springs owed their origin to rain falling on the surface. He established the law of the expansion of gases, and constructed the hygrometer, and proved that the amount of evaporation in any given time was strictly proportionate to the force or pressure of aqueous vapor at the same temperature. His work in this field of pneumatic chemistry first led him to theorize as to the constitution of matter, and to him we owe the first clear conception of the atomic theory as we find it to-day, but little modified, and taking hydrogen as unity he determined the weights of many elements, and the law of multiple proportions through the constitution of the elements in compound bodies. Questioned and doubted, his discoveries were substantiated, and Davy asserted that the "Atomic Theory" was the greatest discovery of the age, and placed his services to chemistry on a par with those of Kepler to astronomy. His useful life

was extended to 1844, and we find in him one of the Nestors of the British Association for the Advancement of Science.

In Dr. Thomas Young we have the third of a triad of great men grouped together by the first President of the British Association as making glorious the history of this period of our century. He it was who first established the wave theory of light; he made deep researches in electricity, and was valued for his mechanical knowledge as well as for his knowledge as a physician. Equally celebrated in science, which knows no country, was Berzelius of Sweden, and Gay Lussac, Ampere, Volta, and Oersted and Arago in France, and Ohm, Seebeck and Becquerel in Germany, whose discoveries only awaited the wizard touch of the Canadian-American, Edison, to cast the rays of a search-light on a whole realm of nature whose mysteries had hitherto been concealed. Following the labors of Lavoisier and his associates in France, and of Werner in Germany, but at a later date, this period further saw laid the foundations of geological science in England, when Mr. William Smith published his map of the strata of England and Wales. Dr. James Hutton and Dr. John Playfair had both preceded him in Scotland, and explaining the past by the present, had appealed to the action of streams and seas, and the processes of decay and reconstruction to account for the changes of which the earth's crust bore records. They boldly led the mind back to an illimitable past for an explanation of world-phenomena, and like Galileo once more dared the anger of those whose Biblical cosmogony had so long obstructed the rational interpretation of the phenomena of Nature. Into the ever-widening field of investigation came Lyell and Sedgwick, Buckland and Murchison, until in 1830 appeared Lyell's "Principles of Geology," which became for thousands of students an open sesame to Nature's wonders. With students as Buffon and Cuvier in zoology, Louis and Dupuytren in medicine and anatomy in France, and Hunter and Jenner in England, it was evident that the *dissecta membra* of science must soon be brought together, when the phenomena of the external world could be utilized to interpret the laws of the physical system of man. At the beginning of the century the medical profession in England was represented by an array of surgeons, physicians and apothecaries and an army of nondescripts from tooth-drawers and cutters to barber-surgeons, subject to no controlling body and unrecognized by law. In 1815 the Apothecaries' Act was passed prohibiting practising without a license, but excepted the Licentiates of the Universities of Oxford and Cambridge, of the Royal College of Physicians, and of the Royal College of Surgeons; and henceforth gave a definiteness of direction to medicine in England which had already made the schools of Paris, Vienna and Edinburgh famous, but which, as we learn from Dr. Oliver Wendell Holmes, was long

indeed in extending its influence across the ocean to America. What England and her daughter lacked then was, what Sir David Brewster, a president of the British Association, lamented as late as 1840, viz.: "A National Institute wherein men set apart and paid by the nation could devote themselves wholly to the study of science." As neatly expressed by Rev. Mr. Harcourt, the first president of the British Association in 1831: "The mining field of discovery seems to me to show on the one part the ore breaking out on every side, and on the other a multitude of hands ready to work it; but no one engaging them to labor or showing them in what manner they may employ their industry to the best advantage." We have already seen how the century opened with a nation awakened into a new life of industry, whether on farm or in factory. The drain of men to the Napoleonic wars and the constant demand for workers for the arts and manufactures, had supplied abundant labor and high wages in England for all; but with 1815 came a sudden change, which was first to create a state of unprecedented misery and discontent, succeeded by social agitations whose outcome none could see, but which were the precursors of that glorious period of reform of which the sanitary improvement of the people formed so important a part. The cotton trade had, till 1815, with good prices, steadily developed, but now fortunately another great step forward became possible, which, by greatly extending its manufacture, gave employment which lessened the prevailing social misery. The power-loom, hitherto an imperfect success, and machinery for spinning was perfected far beyond the capacity for weaving the yarn into fabrics; while the supply of cotton had been enormously increased by the ingenious invention by Eli Whitney, an American, of the cotton-gin. But the Jacquard loom so increased production that the looms multiplied from 3,000 in 1815 to 30,000 in 1825, and the output from \$2,000,000 to 230,000,000 pounds. On the other hand, some 250,000 hand-loom weavers were being displaced, and ruin and destitution followed. To the discontent caused in this way was to be added that of disbanded soldiers and a starving population, where prices had fallen from 74s. to 43s. per quarter for wheat in three years, while even bread, boots, and salt were taxed. As a result, discontent, rioting, destruction of machinery and violence marked the years succeeding the war, while agitation for reform was spread through a growing free press. Luckily, in William Cobbett was found a reformer who was not a revolutionist, and the "Hampden Club" urged peaceful methods, and especially workingmen's clubs, and found support even amongst the upper and middle classes. The first step forward was in 1823, when the protective Navigation Laws were repealed, and in 1826, even the Corn Laws were modified by the sliding scale; while the introduction of rail-

way legislation in 1823, by which an immense demand for labor and capital was made, served further to lessen the miseries of a long commercial and agricultural depression. Already had Fulton steamed his vessel up the Hudson in 1807, and another crossed the Atlantic in 1819; while George Stevenson was giving a practical value to locomotives, of which one had worked on the roads of Paris as early as 1769, and in 1823 there was a charter given for the first railroad, 40 miles long, built by him and operated by an engine essentially the same as that of to-day.

With such era-making inventions marking the progress of science and the diffusion of knowledge of the universe and the capacity of the human intellect to overcome difficulties, it was natural that society at large should become conscious not only of its needs but also of the right and possibility of having them supplied. Hence in the working classes, among whom the wages still remained low, and the conditions under which they lived showed but little improvement, there grew a deep-set determination to assert and maintain their rights. Trades unions grew apace, and even a Conservative Government gave partial legal rights to these organizations.

2. THE PERIOD OF AGITATION.

The agitation was as always for the recognition of popular rights. The year 1829 saw in England the Catholic Emancipation Bill passed admitting Catholics to the rights of free citizenship, while a Bill for Parliamentary Reform, the agitation for which had convulsed the kingdom from end to end, became law in 1832. In 1833 the results of the long agitation by philanthropists were crystallized in a bill for the abolition of the slave trade in the British colonies; in 1834 the growing evils of pauperism were checked by the enactment of a new Poor Law, while in 1835 the Municipal Corporations' Act restored to the inhabitants of towns those rights of self-government of which they had been deprived since the fourteenth century. The year 1836 saw the passing of an Act giving dissenters the right to civil marriage, and 1839 the appointment of a committee of the Privy Council on Education. But now the long results of all these movements towards social progress were to bear fruit in the application of the newly discovered facts of science to measures of sanitary reform. The echoes of the warnings of Sir John Pringle, given in 1750, regarding the preventable evils under which the troops had suffered in Flanders in 1742 and of the unnecessary mortality from gaol fever, had long since died away; and though it had been shown that scurvy had been prevented on the ship *Resolution* which sailed round the world under Captain Cook, through the use of fruits, and even though Lavoisier had spent weeks in studying the pesti-

lential air of the great sewers of Paris, yet the fatalistic belief in disease as being a punishment of men for their sins, was too deep-seated to enable the isolated scientific facts regarding the preventability of disease to be in any great degree realized. But now the evils resulting from the congested populations of industrial centres were becoming so apparent, and the losses to industry through epidemics of typhus, smallpox and cholera to commerce so positive as to be no longer unnoticed by the growing altruism of a progressive nation. Child-labor, often paid for at a penny a day, had become a monstrous and crying evil; yet workmen were driven by poverty to send one after another of their children into factories, only in the end to beat down their own wages. Children of six and seven years of age often worked twelve hours a day in factories, where the atmosphere, physical and moral, was abominable, and children of both sexes were growing up in a commercial slavery. Agitation in parliament caused a committee of enquiry to be appointed and eminent physicians pointed out that the system meant a mental, moral and physical degradation of the mass of the English people. In the Reform parliament of 1833, the good Lord Shaftesbury became the people's champion, and introduced a bill limiting child-labor to nine years; while the manufacturer raised the cry that with such keen foreign competition English manufactures must be ruined. Although, in spite of the doctrine of *laissez faire*, they succeeded in making the ten-hour period applicable to children of thirteen; yet trade was not ruined, but flourished remarkably in succeeding years. The Government actuary had already stated before a parliamentary committee that, though the social conditions of the middle classes of England had improved, yet their expectation of life had not increased. The subject was brought to the attention of a young lawyer who was interested in such matters, and in 1828 he published a criticism of its conclusions which won the attention of leading social reformers and economists. The name, ever dear to sanitarians, of the lawyer was Edwin Chadwick, who, as stated by his biographer, began the study merely as a question of statistics, but as the labor progressed a new train of reasoning came into his mind, which he called the "sanitary idea;" that is to say, "the idea that a man could, by getting at first principles, and by arriving at causes which affect health, mould life altogether into its natural cast, and beat what hitherto had been accepted as fate, by getting behind fate itself and suppressing the forces which led up to it as their prime source." Other papers on "Preventive Police" and "Public Charities in France" followed, and Chadwick was greeted by old Jeremy Bentham, then in his eighty-second year, as a disciple of his creed that "the work of the legislator is to enable people to live happily." Chadwick, now seized with the

sanitary idea, went slumming in East London and took typhus, and all but became one of the first martyrs to sanitation. He lived, however, to become Secretary of Lord Grey's Poor Law Commission in 1832, and in 1834 we find him installed as permanent Secretary of the New Poor Law Board, having acted in 1833 on the Poor Law Commission, in whose report he succeeded in having inserted a clause dealing with the half-time system, by which those children only could be employed who could present tickets of having spent three hours daily in some school during the previous week. Though the Lords amended these proposals somewhat on the ground that they would lead insidiously to a system of universal national education, yet it was soon found that sixty per cent. of the destitute orphan children were going to Poor Law Schools; and it may be noted that this is the law in successful operation up to the present day in industrial schools in England. Of Chadwick's labors during the next five years, Lord John Russell, the father of so many of these parliamentary reforms, said: "For the relief of the destitute and prevention of pauperism, the improvement of the public health and the physical condition of the population, there was no one to whose zeal and assiduity the country is more indebted than to Mr. Chadwick." But his labors were to bear further fruit. The Dissenters had been urging that the State should undertake the registration of births, marriages and deaths, as well as allow marriages to be celebrated by Dissenting ministers. Chadwick saw in this the opportunity to promote the first great principle of sanitary reform by having the causes of death tabulated, establishing thereby a basis for sanitary study and deduction; while the Government to be relieved of a political agitation, followed the lead of Lord Lyndhurst, and in 1836 passed the Registration Act in large measure as it now exists, and the year 1838 saw that distinguished man, Dr. William Farr, installed as Registrar General. To the study of these returns for the last sixty years, every one of us is prepared to say, in the words of Dr. H. W. Richardson, the biographer of Chadwick: "The proverb that 'pestilence walketh in the dark' is no longer true: pestilence measured and registered, walketh at last in the open day."

We have already referred to the distress and discontent following the Napoleonic wars. These, however, were not all or the greatest of the evils. In 1816, typhus and relapsing fever appeared in the rookeries of London, and became epidemic throughout England. Relapsing fever disappeared in 1819, but typhus remained endemic, again becoming epidemic in 1826-27. The year 1826 saw another disease appear, then unrecognized, but in 1849, through the studies of Drs. Budd and Jenner, it became known as typhoid. But evil followed evil, for the decade between 1830-40 saw Asiatic Cholera advance from Russia to Germany,

and sweep over England in the epidemic of 1832-34; smallpox prevailed in 1836-39, and Russian influenza followed in successive waves in 1831-32. And with this decade, in which the emigration of the population grew in increasing numbers, we see America entering upon those years which were similarly to mark the beginning of State Medicine. Of the period prior to this, Dr. Bowditch, in his "Centennial Discourse" at Philadelphia in 1876, briefly writes: "It is the epoch of systems of medicine wrought out by the imaginations of some few of the leaders of our profession. . . . This epoch believes in drugs, and their almost supreme power over art. It has little or no faith in Nature's ability to cure disease."

With the passing of Dr. Benjamin Rush in 1838, the greatest American physician of his day, this epoch of "Systems of Medicine" in which there was no belief in the *vis medicatrix naturae*, came to an end. The teachings of Louis, a preceptor of Bowditch, were now to influence the medical ideas and practice of the rising generation, and to them Bowditch ascribes the "Basis of Public Hygiene" in America, developed principally by the writings of Bigelow and Bartlett, with Oliver Wendell Holmes.

But to return to England, the scene of the great sanitary agitation, which we have seen already as being well advanced, we find that the investigation by Chadwick into the conditions favoring the epidemic spread of typhus in London was bearing abundant fruit. Bishop Bloomfield, then of London, realized the full significance of the facts set forth, and threw all his energy and powerful influence into Chadwick's grand sanitary design; and Lord John Russell, in 1839, instructed the Poor Law Commissioners "to institute what afterwards became the far-famed enquiry into the health of the laboring classes of the other parts of England and Wales beyond the metropolis," which report prepared by Chadwick was presented to the Home Secretary in 1842. In the next year this indefatigable secretary prepared papers on "Graveyards of London," and "Intramural Interments and Disinterments," resulting in the compulsory establishment of cemeteries outside towns and cities. The cause was soon to find another champion in that noble man, the Prince Consort, the spokesman of our beloved Queen. Through his great influence assisting the labors of more active reformers, Sir Robert Peel appointed a Royal Commission, consisting of such famous men as Professor Owen, Dr. Lyon Playfair, Mr. Robert Stephenson, Mr. Smith, of Deanston, and Mr. William Cubitt, to report on the whole subject of the health of the nation. This report was published in 1844. Although no immediate legislative action followed, yet in 1847 another Commission with Chadwick as a member was appointed to enquire into the "Sanitary Condition of the Metropolis." The

evidence of thirty-five witnesses therein set forth was most startling in its effects on the public mind. An immediate result was the formation in 1848 of the first Board of Health, of which Lord Shaftesbury and Mr. Chadwick were members. And it was none too soon, since a virulent outbreak of cholera appeared in 1849. It will thus be seen how the "Period of Agitation," together with our "Period of Investigation," employed the energies of the people of England for half a century. But the labors of the ever-increasing band of workers in the fields of pure science had been gaining in force and directness of aim. In 1831 there had assembled at York individuals and members of local scientific societies, and the British Association for the Advancement of Science was organized. In its annual reports, which now for seventy years have appeared, have been collected the labors of workers in every field of science. Referring to the isolated position of workers in the field of science, the first president of the Association expressed a sentiment, yet to be repeated with much force, viz.: "I do not think it is either politic or liberal to keep those who employ their rarest intellectual endowments in the direct service of the country upon a kind of parish allowance;" which was but saying again what Voltaire said of encyclopædist Diderot, who got but £120 for years for his work. "And then to think an army contractor makes £800 a day."

We now pass naturally into the formative period of public health, which we may properly designate

3. THE PERIOD OF LEGISLATION.

The formation of the first Board of Health for the Metropolis served to meet the emergency caused by the outbreaks of typhus and cholera, which marked these years of great political agitation with their Chartist risings and Socialistic organizations, all growing out of the increasing sense of injury and injustice for which in the popular mind the rich were in some way responsible. The year 1845, of the potato famine in Ireland, presents a picture of misery, the memory of which remains with many yet living, and which from the sanitary standpoint proved of extreme importance to this continent. In the year 1847 very many of the sufferers emigrated to the United States and Canada, and the horrors of the voyage, during a passage of many weeks, can now be realized only by a visit to the silent burial-grounds of the quarantine stations of the Atlantic sea-ports. During that fatal summer alone, 8,639 cases of ship-fever and 5,424 interments took place at Grosse Isle in the St. Lawrence, where a monument still stands to the memory of the devoted physicians who died at their posts, ministering to these unfortunates. From the ports the disease spread inland, and to-day the graveyards of many towns along the great inland

waterways, have numerous memorials of the years of the ship-fever; while the cholera of 1849 added still further to the horrors of the sea-voyage and to the dangers of the populations along the great immigrant routes of the St. Lawrence and the Erie Canal.

The first great measure of reform in England, arising out of this condition of affairs, was the abolition of the Corn Laws, described by Lord John Russell as the "blight of commerce, the bane of agriculture, the cause of bitter division among the classes, the cause of penury, fever and crime among the people." How the hopes of the people were lifted up, accompanied by the deep stirrings of the public conscience, may be seen in the literary romances of the time of such writers as Canon Kingsley, in his "Yeast," and "Alton Locke," the one dealing with the conditions of the agricultural laborers and the other with employees of sweat-shops, and of Charles Dickens, who in "Little Dorrit" and "Nicholas Nickleby" makes scathing attacks on the prison system and the Yorkshire proprietary schools. Such are but a few of the influences which gave momentum to the social reforms following financial reforms, the results of the work of Russell, Cobden and Bright. Political changes retarded somewhat the development of the public health measures, instituted by the "Health of Towns Act" of 1849, and of the first Board of Health, whose existence practically ended with the report of 1854, prepared by Chadwick, now Sir Edward. Its work was thereafter placed under the Local Government Board combined with the Poor Law Administration. Of this great sanitary reformer, whose official work now came to an end, the political economist, John Stuart Mill, in writing to him, said: "I need only mention the Sanitary Department, the importance of which, now so widely recognized, you were amongst the very first to press upon a careless public." Under this first Board of Health was appointed Dr. John Simon as the first Medical Officer of Health, and the City of London Reports, 1849-1854, supply us with the first series of public health reports in which the now every-day subjects of "House Drainage," "Public Water Supplies and their Pollution," "Social Position of the Poor and their Overcrowding," "Offensive Trades," "Smoke Nuisances," etc., are systematically dealt with. With the instincts of a general Dr. Simon began in 1853 to prepare for the cholera which again appeared in 1855, and he has given us in the report of that year not only a history of its progress, but the first comprehensive summary of the sanitary conditions upon which the prevalence of cholera depends. I cannot forbear quoting a paragraph which illustrates how the facts developed in the fields of pure science had invaded the field of practical medicine. He says: "Thus, then, our position stands. Scientific prediction of phenomena can arise only in the knowledge of laws. That the phenomena of this

disease, however capricious they may seem, are obedient to absolute uniformity as yet beyond our ken, are enchained by that same rigid sequence of cause and effect which is imposed on all remaining Nature, it would be impossible to doubt."

But with regard to larger views on public health, we have only to follow the subjects discussed by Dr. Simon in his five successive London Health Reports. In that of 1854 he especially deals with a subject of intense interest to many members of this Association, viz., the establishment of a Department of Public Health, presided over by a Minister of the Crown. He says: "But at least as regards its constituted head, sitting in Parliament, his department should be, in the widest sense, *to care for the physical necessities of human life.*" Such separate department with its Minister of Health was not to be; nevertheless, the General Board of Health was continued, and we find Dr. Simon again in 1858 addressing the Right Honorable the President of the Board, when making a report based upon the lectures of Dr. Greenhow, lecturer on public health in St. Thomas' Hospital, "On the Present Wasteful Expenditure of Human Life in England." Utilizing the Registrar-General's statistics of annual deaths during the twenty years since the Registration Act was passed, this paper deals with the causes of deaths, pointing out that "thousands of deaths annually result from diseases which are in the most absolute sense preventable," and goes on to point out in detail the different diseases included in this category. Successive annual reports presented new series of facts, each repeating with gathering strength the truths of Preventive Medicine; and we find that the proverb, "*Gutta cavat lapidem,*" was here, as ever, true, for, with the reappearance of cholera and typhus in 1865, public health measures were instituted having a scope hitherto unknown. The Government ordered certain scientific researches to be undertaken; we find medical officers sent to the Continent to study these diseases in the seats of their prevalence, and special investigations instituted in those towns where these diseases had already appeared in England. Expert chemists, too, were engaged in studying the physiology of diseases in man, and now for almost the first time we find governmental intervention in the case of outbreaks of disease in animals. Of these, the most important was that by Prof. Grainger into the causation of rinderpest, which caused enormous losses of cattle both in England and on the Continent. It is in the report of 1869 that we find Dr. Simon first referring to those discoveries which have shed undying glory upon the name of Pasteur. He says: "It will now be seen that the views indicated in Dr. Burdon Sanderson's report with regard to the agencies of morbid infection are the views of Schroeder and M. Pasteur on the agencies of fermentation and putrefaction."

Throughout all this period of legislative progress there has been developing with increasing momentum the influence of those workers in pure science whose early labors have already been referred to in some detail. From time to time workers in the field of natural history had expressed views based upon variations in type through environment of both plants and animals; but not until the "Origin of Species" by Charles Darwin was published in 1859, had any scientific hypothesis capable of accounting for biological evolution been given to the public. In 1863 Thomas Henry Huxley published "Man's Place in Nature," and to these works must be credited much of the growth of that method of thought which has been carried into every field of scientific research during the latter half of the century. To comprehend how the scientific imagination was directed into a hitherto untrodden field, we have to turn to the labors of a school of workers in France, soon to become famous through the discoveries mainly due to the labors of Pasteur, known to his countrymen, as to all others, as "*Le Grand Maître*." He may, indeed, in the Carlylean sense, be called a "Poet of the Unseen." Following as a chemist the studies of Spallanzani and Gay Lussac in the field of fermentation and putrefaction, as applied especially to beer, he was soon attracted by Cagniard-Latour's and Schwann's experiments, proving the relation of the yeast-cells present to beer-fermentation, at a time when Helmholtz had seemingly been forced to again support Liebig's stoutly maintained oxygen theory. But in 1857 Pasteur had established the vitalistic theory beyond question, when he proved the presence of rod-like cells, distinct from yeast-cells, by cultivating a new species of germ in sugar, present also in the souring of milk, wholly apart from albuminoid substances. It became his firm conviction that the fermentative process depended upon the life of the organisms present; and by the introduction of culture solutions gave us the first step in that science which we now term bacteriology. Following this came that other remarkable discovery, that certain organisms to which he gave the name *anaerobes*, were paralyzed by the presence of that very oxygen, which till now had been supposed to be the very essence of fermentative changes in organic substances; and soon proved that the real change was that of the fixation of oxygen during the growth of the bacteria themselves. But this germ theory had many battles to fight before it succeeded against the School of Liebig, especially prominent amongst whom was Pouchet, who taught an old doctrine of spontaneous generation. Not till the battle was renewed in England by Dr. Bastian as late as 1876, again to be driven out of court by the beautiful experiments of Tyndall on germless air, as shown by rays of light, was the germ theory of *omnis cellula a cellula*, or *omne vivum ex ovo*, to take its place as

the discovery which has absolutely transformed medical and surgical practice during the last quarter of the century and given us a practical working basis for that isolation and disinfection in contagious diseases, which has reduced their prevalence and mortality to an extent beyond the most sanguine dreams of the early apostles of the new doctrine.

Never was prophecy being more truly fulfilled than that of Pasteur: "*Il est au pouvoir de l'homme de faire disparaître de la surface du globe les maladies parasitaires, si, comme c'est ma conviction, la doctrine de la generation spontanee est une chimere.*"

All will recall those experiments published first in 1877, when this savant, who, at first with such trepidation, trespassed on the field of Medicine—for as he said he was a chemist, and neither a physician nor veterinarian—gave to the world practically all we to-day know regarding anthrax. As in the field of fermentation, others, as Pollender, Rayer and Davaine, and Robert Koch, had already discovered the rod-like bodies in anthrax blood; but it required the wizard touch of Pasteur to give life and meaning to their studies. Never has romance had more fascination than the story of how Pasteur not only proved the rod-forms to be the cause of the disease, but also showed that the slight difference in the blood temperatures of men, animals and fowls, played a governing part in the propagation of the disease; and finally, as he showed in 1881, that by heat the virus could be attenuated until vaccine could be prepared for inoculation against the disease. In the words of his disciple and assistant, Roux, "Medicine had never before witnessed such perfection in experiments, such rigor in deduction, such certainty of application." His further work in the field of immunity, especially with regard to rabies, is now common knowledge; while millions of francs have been saved to France through inoculating animals with anthrax vaccine, and hundreds of human lives been saved from death through the vaccine against rabies. The establishment in Paris of the Pasteur Institute that magnificent international monument to the genius of the "great master," has become for all of us an oft-told tale. Of him in the closing years of his life an intimate friend has written, after describing his personal appearance: "That is Pasteur as he appeared to me: a conqueror, whose glory is as incalculable as the good he has accomplished."

4. PERIOD OF ELABORATION AND DEVELOPMENT.

As will have been noted, Pasteur's first great discovery, that of the bacillus of anthrax in 1876, marks the beginning of the fourth quarter of the century, which we have designated the Period of Elaboration and Development. This is, too, the period which may

be said to mark the beginning of what we call Listerism in surgery. It was at this time that Tyndall addressed a letter to Pasteur, referring to renewed attacks on the germ theory and speaking of "the inattackable exactitude of your conclusions." It was, too, the year of the Centennial Exhibition in Philadelphia, and the holding of the first Public Health Congress in America, shortly to be followed by the outbreak of yellow fever in the valley of the Mississippi, which hastened the establishment of the National Board of Health—of brief but happy memory—and which gave the impulse, owing to which health boards have been established, in almost every State or Province of North America.

In the Republic of Mexico we also find that while a Supreme Board of Public Health had been formed as early as 1841, placing that republic in the first rank amongst us in recognizing the duty of the State to deal with public health as a national matter; yet, as pointed out by Dr. Orvananos, it was not till that remarkable man, General Diaz, was made President in 1876 that this Board was established on a permanent basis. Thenceforth the evolution of public health work in Mexico has been continuously directed by our confrere, Dr. Liceaga, whose labors during a quarter of a century for his country and for our Science entitle him to a first place amongst the sanitarians of this continent, and indeed of the world. In no country that I am aware of does there exist to-day a more complete sanitary organization, or one in which the legislative, administrative and scientific functions are better co-ordinated or more efficiently carried out.

As the St. Lawrence gateway was that through which cholera was first brought to this continent in 1832, so to the Provinces of Canada belongs the honor of very early health legislation. In 1833 the Legislature of the Province of Upper Canada passed an Act, entitled "An Act to establish Boards of Health and to guard against the introduction of malignant, contagious and infectious diseases in this Province, and for the formation of Local Boards of Health." But as the emergency passed, so the central health authority was discontinued, and not till 1882 was the first Provincial Board of Health, with permanent officers, established in Canada.

In England, the year 1875 marked the Consolidation of Public Health Laws, and their extension to the formation of rural sanitary areas and the bringing of the country districts under the same legislation which had applied hitherto to towns.

While it has seemed well to confine this history of sanitary progress during the century especially to those countries of Europe where its first victories were won, yet it must not be forgotten that the needs of the population of the cities of this rapidly developing continent were not forgotten, though, as appears from Dr. Bow-

ditch's paper in 1876, only in eight of forty-eight states had State legislation dealt seriously with public health matters.

Since then, as illustrated in Dr. Abbott's admirable summary of Public Health progress in the United States during the century, what a change is apparent! To-day in this Association we find representatives of State organizations from almost every State and Province from the Tropics to the Arctic Circle. The three national governments of the United States, Mexico and Canada lend dignity to our councils through their official representatives; and what may be termed a system of Continental Health Observatories are reporting weekly the epidemiological conditions which affect 90,000,000 people. National quarantine services co-operate with State Boards in protecting seaboards of 5,000 miles in extent against foreign invasion of disease, and many thousands of Local Boards of Health are constantly engaged in the routine task of improving local sanitary conditions and suppressing outbreaks of those communicable diseases which formerly spread uncontrolled as epidemics. Thousands of cities, towns and villages, by public waterworks, have caused typhoid fever to become one of the least prevalent diseases, while cholera and yellow fever are rapidly becoming only a memory.

In the field of animal disease, progress on this continent during this Period of Development has been yet more remarkable. Especially have we seen in the Bureau of Animal Industries of the United States the development of the most extended application of science to a branch of sanitation which the world has ever seen. That it has been due primarily rather to commercial than to health considerations need not lessen our admiration for a work, whose progress has been intimately associated with one of the oldest and most active members of this Association. To me the history of this organization embodied in the labors of Dr. Salmon is one of the highest examples of rare combination of scientific methods with executive administration which has ever been witnessed; and one can only conceive what the sanitary progress of the United States might have been had a similar Bureau developed, as has the Imperial Health Institute in Germany, public health, in dealing with the diseases of mankind. I have dwelt already much too long, I fear, on the causes which have made the last twenty-five years the Golden Age of Public Health. Of the innumerable discoveries in the field of biology one need not speak, for are we not all in some degree a part of them? If Germany has its Koch and Loeffler, have we not our own Sternberg and Salmon and Sanarelli? If Haffkine, Kitasato, Roux and Manson have shed glory on our Science in eastern lands through their discoveries, so have Welch, Osler and Councilman lent lustre to experimental medicine on our own continent. In the field of the prac-

tical application of science during these twenty-five years to preventive medicine on this continent, we may reply in the slightly altered motto of one of your States: "*Si quaeris agrum amoenum, circumspice*"—"If you seek a pleasing prospect, look around you." For the century which is ending the task is accomplished. Said Prof. Tyndall in 1875: "Science desires not isolation, but freely combines with every effort towards the bettering of man's estate. Single-handed, and supported not by outward sympathy but by inward force, it has built almost one great wing of the many-mansioned home which man in his totality demands."

But to the thoughtful observer of society, as we find it to-day, with its strife between capital and labor as an unsolved problem, recalling a merciless industrial competition still making many of our people as galley-slaves, living under unsanitary conditions which are our shame, and existing on husks while our granaries are bursting with corn, the dealings of Providence must appear, as they did to Job of old, very incomprehensible. With Carlyle such a one is forced to say, "Did I not believe that an Intelligence is at the heart of things, my life on earth must be intolerable." But for us, with the history of the passing century before us, surely there is room for encouragement. Browning, the poet of Optimism, and a sincere believer in Evolution, insists on the love of the Creator being immanent and operative in human life, and, in spite of the woes and sorrows of mankind, as ever carrying him upward nearer to the moral ideal. As he says in "Paracelsus":

"And, man produced, all has its end thus far:
But, in completed man begins anew
A tendency to God."

For us as scientific workers, who have been students of the world-processes in the æons which have caused, as Tennyson calls it, "this fine old world of ours," to rise out of chaos, it ought not to be difficult to take courage from what we have seen this century to have accomplished in the field of our own Science, even though it be but a stone in the edifice. Shall we not enter upon the work of another century with perfect faith as to the ultimate results, trusting in the words of Tennyson:

"O yet we trust that somehow good
Will be the final goal of ill,
To pangs of nature, sins of will,
Defects of doubt and taints of blood;

"That nothing walks with aimless feet;
That not one life shall be destroyed,
Or cast as rubbish to the void
When God has made the pile complete."

ABSTRACT OF THE PROPOSED BILL FOR THE TREATMENT OF DRUNKARDS.

THE main provisions of this bill are as follows: In all cities of Ontario having a population of 20,000 or over, the Police Commissioners are empowered to appoint a Probation Officer, to take the supervision of drunkards placed on probation; by the Court on suspended sentence. These officers are not to be members of the police force, and they are to act more in the capacity of friendly visitors than as informers. They shall also assist the probationer in finding employment when necessary. It will be their duty to investigate, for the information of the Court, the previous record of persons arrested for drunkenness, and to keep records of such investigations, and also of all cases placed on probation. In cases where a fine has been imposed by the Court, this fine may be paid in instalments by the probationer to the probation officer while the person is on probation.

A Medical Superintendent shall be appointed by the Government to inaugurate and superintend the medical treatment of inebriates and dipsomaniacs, and to assist in establishing, for their treatment, cottage hospitals and special wards in general hospitals throughout the Province. He shall also make local arrangements for the administration of home treatment in suitable cases. The Superintendent and Probation Officers shall co-operate in the work of reformation.

Government grants to promote the medical treatment of dipsomaniacs and inebriates may be made as follows: Cottage Hospitals specially established for the reception and treatment of drunkards, or wards in general hospitals specially equipped for this purpose, shall receive, as a bonus, 25 per cent. of the cost of building or special equipment, as the case may be; secondly, a special grant of ten cents a day over and above the usual *per capita* grant to all hospital patients, shall be allowed in cases of chronic dipsomania; and thirdly, an extra grant of 40 cents a day shall be allowed for a period of seven days, for cases of acute alcoholism. The medical treatment not to be considered as a charity, but as a loan to be repaid subsequent to treatment and while the person is still on probation.

Able-bodied chronic drunkards, instead of being fined or sent to jail, shall be sent to the Central Prison for not less than six months, and all subsequent sentences to be cumulative. Able-bodied female drunkards shall be sent to the Mercer Reformatory on cumulative sentences. Chronic drunkards, male or female,

not able-bodied, may be provided for in County or City Houses of Refuge.

Three physicians of standing in the Province may be appointed by the Government, as a Committee of Consultation, to co-operate without salary, with the Superintendent, in inaugurating and carrying out the purposes of this bill.

Excerpts from the Report of an Advisory Committee appointed by the Hon. Josiah Quincy, Mayor of Boston in 1899, on the Penal Aspects of Drunkenness.

No aspect of the present methods of dealing with drunkenness is so hopeful in its results as the work of probation officers. Fortunately, also, none is more universally commended, or more capable of immediate improvement and extension.

The probation officer, it will be observed, is a direct appointee of the court, and responsible solely to the court. His functions may be described as essentially twofold; he may be regarded as the confidential agent and adviser of the court, on the one hand, and of the prisoner on the other.

The probation officer thus stands for leniency, for another opportunity to escape the personal disgrace and the vicarious suffering of family and friends which imprisonment or fine, or both, must often involve; he stands for another chance at reformation under the powerful stimulus of the personal, friendly guardianship of an officer of the law; for another chance to strengthen the will and develop the power of self-control, aided by the most effective deterrent yet devised—conditional and suspended punishment. For experience shows conclusively that a paternal solicitude which is invested with the dignity of the law and the authority of the courts often has weight and influence where the ordinary and unofficial forms of moral suasion are of no avail.

In the midst of such conflict of opinion and apparent contradiction in fact, it is a source of profound satisfaction to find on all sides a cordial agreement in regard to a matter of fundamental importance. Such agreement it is the satisfaction of this committee to report in regard to what is known as the probation system.

The venerable Chief Justice of the Municipal Court has unhesitatingly given the full weight of his authority and prolonged experience in favor of an extended use of probation officers and of improvement in present methods of dealing with drunkards. The same weighty and convincing verdict of approval is rendered by the judges who have had largest experience and best opportunities to test the efficacy of probation. No one can question the weight

of such endorsement by judges who are in daily contact with the probation officers; who are constantly receiving their assistance in the disposition of cases; who are continually confronted by the visible evidence of improvement which a term of probation has wrought in the appearance and conduct of men and women who are brought before the court at stated periods for inspection, extension of probation, or discharge.

A similar consensus of opinion has been found among police captains and other officers; some of them frankly confess that the attitude of conservatism or avowed distrust with which they regarded this innovation in the beginning has been converted into a cordial co-operation, while probation officers in their turn, ascribe much of their success to the ready assistance afforded them by the police.

The heads of penal institutions, the chaplains and other officers whose constant dealing with drunkards and misdemeanants entitles them to speak as experts in regard to the effect of various forms of discipline, also commend the use of probation for a large class of offenders as a substitute for the dangerous and demoralizing alternative of imprisonment under conditions of companionship, which at best must tend to confirm rather than reform evil ways. From such officials also come the frequent appeal for an extension of the principle of probation to what are known as PAROLE CASES, in order that the larger class of offenders who are granted permits to be at liberty before the expiration of their full sentence, may also have the benefit of the deterrent and reformatory influence of personal and friendly watchfulness by a representative of the court.

DR. FIFE FOWLER, who has been connected with Queen's University Medical Department, Kingston, for fifty years, has resigned the professorship of the practice of medicine. Dr. James Third, late Superintendent of the Kingston General Hospital, is his successor. Dr. Fowler retains the position of Dean of the Faculty.

THE Eye, Ear and Throat Hospital, at Buffalo, N.Y., has installed the largest magnetic apparatus in the country for drawing steel or iron from the eye. Mounted on a stand of brass and iron it weighs about four hundred pounds, the magnetizer is 35 inches long and pointed at both ends, and the coil consists of 21,000 turns of copper wire, which, if charged with 500 volts, will furnish volts sufficient to support a ton weight. This instrument is an improved Haab magnet, and cost in the neighborhood of \$300.00.
—*Phila. Med. Jour.*

**REPORT OF DEATHS FROM ALL DISEASES AND FROM CONTAGIOUS DISEASES IN ONTARIO FOR
THE MONTHS OF AUGUST AND SEPTEMBER, 1900.**

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

AUGUST, 1900.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Rate per 1000 per annum from all causes.	Scarlatina.	Diphtheria.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
2,271,890 99%	768 98%	2,371	12.5	8	31	0.04	14	0.005	44	0.7	180	0.2
												0.0

SEPTEMBER, 1900.

2,270,150 99%	715 92%	2,490	13.1	3	42	0.01	20	0.01	58	0.1	172	0.3
												0.9

Population of Province 2,283,182
Registration Divisions of Province..... 777

Oral Surgery.

IN CHARGE OF
E. H. ADAMS, M.D., D.D.S.

CASE OF FRACTURED LOWER JAW.*

BY JOHN G. HARPER, D.D.S., ST. LOUIS, MO.

WHEN called upon by the executive committee, I had charge of a patient with a broken lower jaw, and gave the title, "A Case of Fracture of the Lower Jaw," but the programme was put forth with "Care of Fracture of Lower Jaw." This title suggests a broader subject.

Who should have charge of such cases, the general surgeon, or the surgeon dentist? All of these cases fall first into the hands of an M.D., who as a rule calls in a surgeon. The reason for this procedure is generally due to ignorance regarding the ability of dentists in treating such cases, also very few public institutions have a dentist connected with them. The surgeon uses bandages and does not expect to restore the original articulation existing previous to the fracture.

What is the remedy for this state of affairs? Recently the appointment of dentists to the army has been urged. Military men favor the movement, as they have felt the need of the services of the dentist in caring for their teeth. In time of peace soldiers are perhaps more subject to accidents than citizens. The accident may result in a broken jaw. Should dentists be appointed to the army, then our hospitals would awake to the need of our services.

But few dentists have paid enough attention to this branch. Given an opportunity, men would be stimulated to qualify for such practice.

It is useless to tell dentists they are the men to take charge of the class of cases under discussion. Only the dentist can construct and apply an interdental splint. Bandaging or wiring together the broken bone does not appeal to the dentist as the most desirable mode of procedure. Here I wish to ask a question. What would you do in case you were called in to assist or take charge of a case of fracture of the lower jaw?

To those who wish to become posted upon what I consider the best means of managing such cases, I would recommend the study

* Read before the St. Louis Dental Society, October 10th, 1899.

of "Fracture of the Maxilla" in "Angle's System of Regulation and Retention of the Teeth and Treatment of Fractures of the Maxilla."

In case of fracture, about three weeks is generally sufficient for the bone to unite and be firm enough to allow the splint to be removed.

I see by the history of seven cases of fracture of the maxilla given by Dr. Angle that the time varies from twenty days to one hundred and twenty, the average being almost forty-five days. These facts are given as an aid in the prognosis.

In case the fracture occurs posterior to the molars it is necessary to resort to fracture bands, the broken jaw by their aid being wired together. In case the break is in the anterior portion of the jaw the fractured bone can be held in position by the application of the expansion arch, the same that is used in regulating teeth, a number of the teeth being wired or ligated to the expansion arch.

CASE.—About December 1st, 1898, a locomotive engineer made a miscalculation in jumping off a moving train. He was thrown against a car on a sidetrack with such force that his lower jaw was broken at the site of the left central incisor, the fracture being oblique, pointing inward. The railroad surgeon was able to reduce the fracture by wiring the teeth together, but could not retain the parts in position for any length of time.

December 6th the patient was brought to me. Models of both jaws were made. The model of the broken jaw was sawed in two, and an attempt made to adjust the parts so as to represent the jaw previous to being fractured. This could not be done with satisfaction. The first idea was to make an interdental splint of rubber or aluminum. Dr. James P. Harper, who had seen the case, suggested using the Angle expansion arch. With his aid and that of Dr. Grinstead, the railroad surgeon, the appliance was put in place and the fractured parts brought in apposition. The left first and second bicuspids were wired to the expansion arch, to bring forward the left side of the jaw; a wire ligature was passed around the tip of the right lateral (which was a little longer than the two proximal teeth) and around the expansion arch; this, when tightened, brought up the left part into line. Previous to the application of the fixtures there had been considerable constant pain, which disappeared. The parts seemed to be immovable under ordinary use, but moved slightly when the mouth was open to extreme limit.

The patient resumed his vocation in about three weeks after the appliance was put in place. He visited me once in four weeks until May 17th, when the appliance was removed, which might have been done much sooner, but he preferred to have it remain as a safeguard.

Previous to the accident the occlusion was abnormal, the bicuspids on left side not coming in contact, also the first on the right side, the second superior on right occluded its posterior half of occlusal surface on first molar.

At time of adjustment of appliance the left central was quite loose, and in a few days a portion of the alveolar process on labial surface was removed followed in a few days by the loss of the tooth itself.

The model of the lower jaw made after the removal of the appliance shows that the space occupied by the missing tooth is obliterated by contraction of the point of fracture. The articulation is evidently as good as it was previous to the accident.

In conclusion, I quote the last paragraph from Dr. Angle's book previously mentioned.

"Finally, as all the apparatus possessing any special merit in the treatment of fractures of the maxillæ have been invented by dentists, and their familiarity with the parts, special knowledge of mechanics, and facilities at their command fit them above all other surgeons for this work, I would recommend that the different dental societies throughout the country shall secure appointment of competent dentists, in all hospitals, for the treatment of these lesions, for to them this special line of surgery justly belongs."

E. H. A.

MICRO-ORGANISMS OF THE MOUTH OF THE NEW-BORN.

GIUSEPPE CAMPO (*Pediatrics*, Naples, vii., 229, August, 1899) has carried out a series of researches on the micro-organisms of the mouth of the new-born in order to ascertain (1) if the mouth at the moment of birth is free from germs; (2) the development of germs along with the establishment of the primary functions of life; and (3) the isolation of them and their pathogenic action. Reference is made to the work of Vignal, Biondi, Sanarelli, Freund, and Kreibohm, and the methods used are described. The contents of the mouth were taken at the moment of birth (the head of the infant being still on the perineum), four hours later when respiration had been going on, and twenty-four hours later when lactation had been commenced. Ten infants were examined at these three times, and twenty-one others were examined at one or other of the times named. Campo concludes that the mouth is sterile at the time of birth, for out of twenty-one cases in which the buccal contents were examined at the moment of birth, in six no germs were found; the fifteen cases in which organisms were found do not in his opinion invalidate the conclusion, for in some of these the contents were collected by the midwife in

attendance, and in others it may be that germs gained entrance from the maternal vagina during labor. The effect of respiration was that the mouth immediately lost its asepticity, and sixteen observations made about four hours after birth demonstrated that the ordinary bacteria of the air find in the mouth a suitable soil, and multiply with great rapidity; they were the *Bacillus mesentericus vulgatus*, the *Bacterium termo*, and the *Bacillus ulna*. The first effect of lactation was found to be a diminution in the number of germs, possibly due to the mother's milk washing them downward into the gastro-intestinal tract; but its second effect seemed to be to increase the number of the kinds of germs met with. This effect Campo thinks is the result not of new varieties being introduced in the milk, for the milk direct from the breast is sterile, but of a power conferred by the milk upon the buccal contents of growing new kinds of germs. The organisms found were, in order of frequency, the *Bacillus mesentericus vulgatus*, the *Bacterium termo*, the *Bacillus ulna*, *subtilis*, *leptothrix*, and *lineola* (?), and three non-identified germs, to which the names of bacillus *x*, and coccus *y* and *z*, have been given. It was further discovered that none of these micro-organisms had any pathogenic properties, for intra-peritoneal injections of cultures of them into guinea-pigs did not produce any phenomena indicating virulence, save a slight diminution of the body weight. The characters of the non-identified germs and their cultures are fully described; bacillus *x* and coccus *z* caused passing loss in weight.—*British Med. Journal*.

In the *Journal of the American Medical Association*, Sept. 1st, Dr. Stone has recorded a case of keratolysis, or skin-shedding, in a strong, healthy man of fifty years of age, who shed his skin every year. This curious affection has been spoken of as "analogous to the moulting of birds."

A MEDICAL PEER IN THE UNITED STATES.—The death is announced of Dr. Fairfax, of Maryland, who was the eleventh Baron Fairfax of Cameron in the peerage of Scotland. He was born in Virginia, and, according to the *Brit. Med. Jour.*, it was from the Fairfax family settlement in America that Thackeray drew the inspiration for "The Virginians."

POISON IVY.—Dr. Pfaff, of Harvard, has investigated the poison of *Rhus radicans* and finds it to be a non-volatile oil, present in every part of the plant, which cannot be washed off the skin with water alone. It is said that a remedy has been discovered in the form of a solution of alcohol, of 50 to 75 per cent. strength, and sugar of lead; and that its efficacy has been tested by the Department of Agriculture.—*Med. News*.

Selected Articles.

TRIBUTE TO THE MEMORY OF HUNTER HOLMES McGUIRE, M.D., LL.D.

At a called meeting of the Richmond Academy of Medicine and Surgery, September 20th, the following resolutions were adopted:

But two short weeks have passed, and for the third time the hand of the grim destroyer has been abroad in our midst. Not yet recovered from the keenness of our first sorrows, we are summoned to lament the loss of the leader in our ranks. Hunter McGuire has answered his last roll-call; and we, his fellow soldiers in the battle of life, desire to place on record a simple testimonial to the splendid example which a study of his well-rounded work must furnish to all thinking men, of how the heart-treasures of courage in the presence of adversity, and unswerving purpose to mould character by the rule of right, inspiring and impelling a mind broad in natural scope and cultured by study and travel and deep reflection, must bring their guerdon of success in every field or labor.

God endowed him with great natural gifts of head and heart, and great opportunities came into his life. He had power to comprehend and to adapt them to the needs of every occasion. He has left his stamp on this community, on us as a local profession, and on the professional world. Tenderly we treasure his memory; deeply we mourn his loss; but we do not "mourn as even without hope." His example is a precious heritage, an inspiration to young and old, and, therefore, thankfully acknowledging the goodness of God in honoring the profession of medicine with a man whose life-work may worthily be emulated, and obediently accepting the decrees of Divinity in all things as the decrees of wisdom, we bow with humble submission and say, "Thy will be done."

We tender the assurance of our gentlest sympathies to his sorrowing household.

That a copy of these resolutions be spread on the minutes of the Richmond Academy of Medicine and Surgery and given to the press for publication.

(Signed)

GEORGE ROSS, M.D., *Chairman.*
WM. S. GORDON, M.D.
LANDON B. EDWARDS, M.D.
H. H. LEVY, M.D.
MOSES D. HOGE, M.D.

In offering the resolutions above, Dr. Ross, as chairman, delivered one of the most touching and glowing tributes possibly ever heard in the Academy's hall. Dr. Ross said:

In presenting these resolutions I want to say: Silence has been called golden. Sealed lips may conceal the sorrows and suffering of an aching heart; but for me to sit silent in this presence and on this occasion would be to brand myself false to friendship—false to every emotion that moves my soul. I cannot consent to wear the mask of forgetfulness.

Death's messenger has been busy thinning the ranks of the medical profession of this city during the past twelve months. That fearless and self-sacrificing physician, erstwhile the dashing Christian soldier-artillerist, W. W. Parker; the modest, manly, honest, and always-to-be-counted-on John F. Jackson; the quiet, well-equipped and unobtrusive teacher-physician, Richmond Lewis; the knightly, gracious young physician, just budding into professional prominence, J. Travis Taylor, and that plumb-line doctor, Benjamin Harrison, have each answered the summons calling them up higher, and heard the welcome greeting, "Well done, good and faithful servant."

Death loves a shining mark. To-day we are assembled to do honor to the memory of one of whom it may justly be written, he was the most brilliant luminary in the medical constellation of the South.

Hunter McGuire, the gifted surgeon, is dead! His name is oar and parcel of American surgical history. It is the synonym for accuracy in surgical diagnosis and skill in surgical technique. Wherever the English language is spoken and medical men gather for the discussion of surgical subjects, a quotation from his pen or tongue carries such conviction as few names could evoke. His personality was most charming, and, though singularly free from the grace of manner so coveted by many in social life, he won all hearts by his simplicity, his directness, his earnestness, his unostentatiousness. At various times of his life he was a professor in three medical colleges, and died serving one. I feel safe in asserting that his strong personality and wide reputation were the most potential factors in the upbuilding of the University College of Medicine to its present conspicuous position. No teacher more instructive or more pleasing ever lectured to a class, and no man ever more genuinely enjoyed the affection and confidence of his pupils. In the amphitheatre they hung on his words, and when later on they became busy workers in professional life it was from him that they sought counsel by correspondence, and into his hands committed their obscure and complex cases for treatment. His generosity was limited only by the opportunities for dispensing it. His hand was always ready to do service for the poor and

needy, "without money and without price," and his purse-strings were never tightened when the privilege of giving was extended to him. No man could count more on stauncher friends, and no man more richly deserves their confidence. He was gifted with rare executive ability and an irresistible personal magnetism. Without these qualities he could never have commanded the following that made it possible for him to empty the medical schools of Philadelphia of Southern students in 1860, and subsequently to grow, step by step, with "Stonewall" Jackson; to be the ideal medical director and organizer of the surgical department of the great army corps of that chief of heroes in modern military history. He measured up to every responsibility laid upon him, from the morning of life until the shadows of life's evening fell suddenly upon him. He began his career in this community after he had heard the requiem march sounding the death-knell of the Southern Confederacy on the field of Appomattox, and from the first day that he sought to serve this people until the day when he was driven to his own door, speechless, stricken with paralysis in his buggy—save a needed summer vacation, there was no let-up in his work. He courted a generous rivalry, because it was a stimulus to the development of his genius, of the possession of which he had an inner consciousness, but his character is untarnished by envy of his rival's successes. His will was indomitable—his energy exhaustless. *Excelsior!* was his motto. *Excelsior* was the goal he attained to. Now he sleeps—fallen asleep in the shade beneath the trees of his quiet suburban home. Stilled for all time are his busy brain and tender heart and willing hands.

They've shrouded him—they'll bury him ;
The dirge will cease its sounds ;
The footsteps of the sorrowing
Turn sadly from the grounds.

They'll bury him—the soldiers' friend
In days of bitter strife,
When sons of North and South arrayed,
Fought for their nation's life.

They'll bury him whose earnest face,
When Peace had spread her wings,
Was messenger that gladdened homes,
So hope about him clings.

They'll bury him—a noble son
Of famed Virginia's soil ;
Physician born of classic mien,
High bred, in godlike toil.

They'll bury him whose broad'ning fame
Begirts the lands and seas ;
Who filled in every audience hall
The foremost place with ease.

They'll bury him—yes, mortal part,
 But still his spirit lives,
 And to the scientific world
 Clad inspiration gives.

Dr. Ross was the life-long companion and most intimate friend of Dr. McGuire, and the beautiful tribute which he offered, ending with poetic lines so touching, will ever be counted a monument to the memory of one we all loved so well.

B. L. R.

THE NEW TREATMENT OF SYPHILIS WITH BIN- IODIZED OIL.

BY DR. P. CHAPELLE, PARIS.

THE "specific bin-iodized oil," recommended by Panas, Dieulafoy, Lancereaux, Brissaud, Fournier, and the leading specialists for the diseases of the skin, is a very dilute and unsatisfactory preparation, but a great improvement in the administration of mercury has been recently made, by utilizing the solubility of *nascent mercuric iodide* in a strictly neutral aseptic oil, which keeps indefinitely.

This "specific bin-iodized oil," which contains one per cent. of HgI_2 , has been aptly called cypridol (a name which gives no clue to the patient or to those around him as to the nature of the medicament), can be used either hypodermically or taken in capsules.

Cypridol is vastly superior to the usual soluble or insoluble mercurials, the assimilation and subsequent elimination of which is uncertain, while salivation, vomiting and diarrhea are amongst the least of their disadvantages.

Since Ricord's time, insoluble mercurial treatment has been largely adopted on account of the severity of the soluble salts, but their assimilation is slow, irregular, and gives rise to considerable trouble in the alimentary canal, even when given in combination with small doses of opium. All disadvantages of this nature, which are inevitable with soluble and insoluble mercurial preparations, are avoided with cypridol, which does not affect the stomach or digestive organs, and rarely produces salivation, even in massive doses. It is conveniently exhibited in capsules of 20 centigrammes each of which represents exactly *1-32nd of a grain of mercuric iodide*.

One capsule should be taken with the two principal meals daily, and this dose may be increased to five capsules daily, but should not be exceeded, except under special conditions dependent on the susceptibility of the patient to the treatment.

Our experience in the clinics shows that it is advisable to commence the treatment of the capsules or injections of cypridol (or to alternate their administration) as soon as syphilis is recognized and to continue it for three consecutive years, even if there is an apparent cure after a short time.

During the first three months, the treatment may be suspended eight days every month, during which interval, small doses of iodide of potassium, sodium or strontium are given.

For the following three months, the cypridol treatment should be administered every alternate fortnight, and after that, eight days of each succeeding month.

This radical treatment with cypridol will insure the patient's permanent cure; it is indispensable, however, to maintain the best hygienic conditions of life.

Frequent, but not too prolonged hot baths; washing, to free the skin from irritation, are useful, and care should be taken to keep the buccal cavity exceptionally clean by careful washing and gargling of the throat with boracic acid and chlorate of potassium. An ointment of the same should be used to anoint the genital and anal orifices.

The great antiseptic and antizymotic value of cypridol can be utilized in a great number of cases.

It constitutes an excellent specific for bacteriological affections or parasites of the alimentary canal, the skin and the scalp, and is indicated in the treatment of serous affections, fistulas, cold abscesses, white tumors (in hip, knee, ankle), lupus, spina ventosa and other manifestations of tuberculosis.

Successful experiments have been made in the Paris Hospitals on neoplasms, anthrax, furunculosis, paludal intoxication, and in the great majority of epidemic diseases.—*Selected.*

ADVANTAGES OF THE SPRAY IN PSEUDO-MEMBRANES OF THE PHARYNX.

BY D. C. BROWN, M.D., DANBURY, CONN.

On the exposed surface of the pseudo-membrane in diphtheria, the diphtheria bacilli mass in abundance, *reproducing* themselves and generating toxins; while, penetrating the membrane to its middle layers, the mixed or single form of pyogenic cocci are found, or may even enter the organized tissues themselves. Drawn up to oppose the entrance of these foreign forces the organism has thrown out, from its side of the membrane, an army of phagocytes, with their "forlorn hope" of alexins, who engage the foe

in "mortal combat" until the battle is lost or won. Experience has proven, however, that these forces of nature are inadequate to protect the organism from invasion and are only partially able to subdue the enemy after he has gained a foothold, *especially while he is thus drawing from a rich base of supplies and recruits.* They (the phagocytes), on the other hand, have advanced further and further from their base of supplies and at length have penetrated the enemy's lines so far that his toxic influence is too great for them and they succumb.

It is, therefore, with the spray, better than any other means, that we may attack the enemy in the rear, destroy his supplies and prevent the recruits from joining the line of battle. Irrigation fails to give the penetrating power necessary to get to the middle layer of the pseudo-membrane. It and gargles are good for cleansing, but I fail to see the reason for the oblivion to which modern teaching has consigned the spray. I admit that harm may be done with it, and that the child fights against it; but the same objections hold good against irrigation, and the young cannot gargle. I avoid spraying the uvula unless covered with a pseudo-membrane, and in fact avoid any healthy membrane with the direct force of the spray, for I aim to get force enough to see the tissues play out with the spray.

Personally, I have two favorite solutions which I rely upon to be used as sprays in accordance with the individual case. The first is hydrozone, and I direct that the nurse put two teaspoonfuls with three to eight teaspoonfuls of water and use at first every half hour or hour. I use this especially in all denser membranes, that the hydrozone may break up and disinfect the middle layers of the pseudo-membrane. It makes a way for other antiseptics which may be subsequently used.

The second spray is a solution of formaldehyde, directed to be used as follows:

R Sol. formaldehyde, $\frac{1}{4}\%$	30-60.	$\overline{\text{ss}}$ - $\overline{\text{ij}}$
Kal. chlor.....	8.	$\overline{\text{ij}}$
Acid. boric	4.	$\overline{\text{ij}}$
Glycerine.....	15.	$\overline{\text{ss}}$
Aq. ad	120.	$\overline{\text{iv}}$

M. Sig.—Use in spray after hydrozone.

This I make the standby, and vary the strength according to the conditions, and continue with it when the pseudo-membrane has become so thin that I do not care to continue with the hydrozone. Remembering the middle layers of the pseudo-membrane and the depths of the crypts, I shoot hard and quick, and resort to the spray early, and very often do not have to use the antitoxin.—Abstract from the *New England Medical Monthly*, January, 1900.



“Has Crossed the Bar.”

BUT yesterday the great British Nation made the world resound with its cheer and shout of “Long Live the Queen”—it was the Jubilee year of the reign of a Woman, a queenly woman. To-day the world receives in solemn silence the message of the passing of the great soul from earth—Victoria is dead.

Above the regal splendor, the dignity and pomp, and in the full glare of the light that beats about the Throne of England, rose its sceptre, held by a woman's hand, steadfastly, immovably, for over sixty-three years. On a woman's head shone a diadem whose setting of richest gems was ever lustreless beside the purity and nobility of the brow they were deemed worthy to adorn.

As Sovereign Lady and Queen, the world knelt in homage. As wife, the world bowed in admiration. As widow, the world paused in reverent sympathy and read the words inscribed on the mausoleum of the Prince Consort, “Here at last I shall rest with thee; with thee in Christ shall rise again.” As mother, the world blessed her and thanked her, for she has given to the great British Empire its King, Edward VII. She has left His Majesty the most noble example of a spotless life; and to her loyal subjects and the world she has bequeathed the memory of a reign that has stood alone, without a peer or a precedent in the history of the universe—the Victorian Era.

W. A. Y.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,

EDITOR,

69 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P.LOND.

BUSINESS MANAGER,

145 COLLEGE STREET, TORONTO.

Surgery—BRUCE L. RIBBAND, M.D., C.M., McGill University; M.D. University of Toronto; Surgeon Toronto General Hospital; Surgeon Grand Trunk R.R.; Consulting Surgeon Toronto Home for Incurables; Physician Examiner United States Government; and F. N. G. STAIR, M.B., Toronto, Associate Professor of Clinical Surgery, Lecturer and Demonstrator in Anatomy, Toronto University; Surgeon to the Out-patient Department Toronto General Hospital and Hospital for Sick Children.

Clinical Surgery—ALEX. PHIMSTROE, M.B., C.M. Edinburgh University; Professor of Anatomy and Director of the Anatomical Department, Toronto University; Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. H. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital; Member of the American Orthopedic Association.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Gynecology and Obstetrics—GEO. T. MCKROUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Newmarket, Ont.

Medical Jurisprudence and Toxicology—N. A. POWELL, M.D., Toronto, and W. A. YOUNG, M.D., L.R.C.P. Lond., Toronto.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital

Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Out-patient Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.D., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology and Otiology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician Toronto General Hospital; Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. IX.

TORONTO, FEBRUARY, 1901.

NO. 2.

Editorials.

ENGLISH AND CANADIAN BEERS COMPARED.

We notice in the Associated Press despatches, January 11th, that the British Government has appointed a commission, of which Lord Kelvin, President of the Royal Society of Edinburgh, is President, to investigate the beer-poisoning epidemic in Manchester and District. The Commission is specially instructed to inquire into the presence of arsenic in beer and other drinks and

foods, and to report how the presence of the poison can be prevented. This subject was first brought to the attention of medical readers outside of England in an article entitled "An Epidemic of Peripheral Neuritis among Beer-drinkers in Manchester and District," by Ernest S. Reynolds, M.D., F.R.C.P., which appeared in the *British Medical Journal*, November 24th, 1900. He stated that for three months prior to the appearance of his article an unusual number of patients had presented themselves at the out-patient department of the Manchester Royal Infirmary suffering from symptoms of peripheral neuritis, and that a very large number of similar cases were under treatment in the medical wards of the Manchester Workhouse Infirmary during the same period. Other practitioners met with the same unusual prevalence of peripheral neuritis. Dr. Williamson found that nearly half of the out-patients of the Ancoats Hospital showed signs of the disease. Dr. Dreschfeld had also noticed the unusual prevalence of neuritis, and medical men practising not only in Manchester, but in Salford and the surrounding districts, had recently seen many cases of this type. Dr. Brooke, lecturer on Dermatology at Owens College, had been struck with the great number of cases which, during the last three months, had presented a peculiar skin eruption characterized by marked pigmentation either diffused or in spots. Dr. Reynolds satisfied himself that the cases occurred only among beer-drinkers, and that alcohol could not be the only factor in the production of neuritis, and certainly not in the production of the pigment. He also stated that he had found arsenic in samples of beer, and his analysis had been confirmed by Professor Dixon Mann. As to how arsenic could have got into the beer, Dr. Reynolds at first suggested that it might be derived from arsenic in the sulphur used in the hop industry; but in a subsequent letter he negated this opinion.

The report of Dr. Niven, M.O.H., Manchester, which appeared in the *British Medical Journal*, December 15th, 1900, showed that there had been a remarkable increase in the number of deaths attributed to peripheral neuritis, to alcoholism and cirrhosis of the liver, in the first eleven months of 1900, as compared with the twelve months of 1899; but that an analysis of the figures for these periods taken together with those of 1897 and 1898, gave grounds for supposing that the causes which had brought about the epidemic operated also in 1898 and 1899. During the last

months of 1900, many physicians practising in Manchester and District had noticed that a great many patients suffering from peripheral neuritis asked for advice and treatment. The prominent symptoms were great tenderness of the skin and muscles, sensations of numbness and tingling, with tenderness and signs of irritation in the conjunctivæ, bronzing of the skin, and eruptions of herpes and erythema, all of which pointed to poisoning by arsenic rather than to the toxic effects of alcohol. As all these patients were habitual beer-drinkers, the advisability of examining the beer used by them occurred to the physicians, and the question was finally settled by Dr. Reynolds and Professor Dixon Mann finding arsenic on making chemical analysis of different samples of beer.

Subsequently general attention was called to the matter, and many references to it have appeared since then in the British medical press, the epidemic being traced to arsenical contamination of brewers' sugar. Thus a Commission of experts appointed by the Manchester Brewers' Association issued a report, which appeared in the *British Medical Journal*, December 22nd, 1900, and containing the following: "The Commission has not detected the presence of arsenic in brewers' materials other than the sugar supplied by Messrs. Bostock & Co., Limited."

It appears that pure beer, brewed from malt and hops, is too expensive for the masses in England. In order to make the drink cheaper, two kinds of brewing sugar are used instead of malt; one obtained by the action of sulphuric acid on inferior grades of cane sugar, called in the trade glucose, and the other by the action of the same acid on starch, usually obtained from maize, sago or tapioca, and called in the trade invert sugar. If pure sulphuric acid were used, the brewing sugar would be wholesome. The commercial acid is got by the roasting of iron pyrites, which, in addition to sulphur, contains arsenic, and both are passed over into the condensing chambers in the form of vapor, and are afterwards sold as "commercial acid." Dr. Harold Dixon, F.R.S., Professor of Chemistry in the Owens College, Manchester, says this acid contains "more than 1.4 per cent. by weight of arsenious acid," also that "there is strong evidence that the glucose, in the manufacture of which it is used, contains fully 0.05 per cent. by weight of arsenious acid." The amount of arsenic which gets into the beer has been stated by Mr. William Kirkby, from the analyses of seven-

teen samples, to vary from a trace to 0.28 grains per gallon, one grain in three gallons having a poisonous quantity. It would seem, therefore, that the best way to obviate such a sad state of things as now exists in Manchester and District is, as Mr. Kirkby says, "to establish a test for arsenic, to which all sulphuric acid that is to be used for the manufacture of food and drinks must conform, just as in the case of that which is to be used in medicine. This extra precaution is all the more necessary as invert sugar is also used in the manufacture of jams, ice cream, marmalades, cheap confectionery, and such drinks as lemonade and ginger beer.

In order to ascertain if the brewers of this country substitute glucose and other substances for malt, we have corresponded with some representative Canadian brewers, and have been pleased to learn that, to use Mr. O'Keefe's words, "In the manufacture of ale, porter, and lager beer in Canada, the only ingredients used are malt, hops, yeast and water." (*Vide* p. 138). Mr. Labatt, of London, also sends us a very instructive letter, making the same claim. We also append herewith the statement of Mr. Thomas Macfarlane, Chief Analyst of the Inland Revenue Department, Ottawa, Canada, who in 1897 wrote as follows in Bulletin 52, Malt Liquors: "Under the present law of England, says Allan (*Organic Analyses* 1, p. 90), 'the malt of typical beer may be replaced by any saccharine or amylaceous substance.' Under the Bavarian law, beer is a fermented liquid prepared only of barley malt, hops, yeast and water. The Canadian system resembles the German rather than the English, for all Canadian beers are made from malt, *unless in cases where the use of some other substance has been declared*, which is an extremely rare occurrence."

Curious to learn if this statement still holds, we wrote to Mr. Macfarlane, January 8th, 1901, and have much pleasure in publishing his courteous reply, which appears in the correspondence at p. 137. It will be reassuring to the physicians of this country to learn from leading brewers like Messrs. O'Keefe and Labatt, and the Chief Analyst of the Canadian Inland Revenue Department, that the beers, porters, and lagers made in Canada are almost without exception the products of malt, hops, yeast and water. It is regrettable that in Canada, which produces the finest barley in the world, the use of cerealine and brewing sugar, in place of barley malt, should be allowed, and we hope that legislation will

be introduced putting a stop to such practices, and making the Canadian brewing law a fac-simile of the Bavarian law in this particular.

J. J. C.

SOME OF THE KIND THINGS SAID AS TO OUR JANUARY NUMBER.

A SUBSCRIBER in New York City writes and says: "Your illustrated number is superb, and taken altogether the debut of the JOURNAL at the opening of the new century reflects great credit and enterprise on its staff of editors. May it grow in influence and usefulness, and become a solid and permanent fixture in medical literature among all English-speaking people the world over."

A PHYSICIAN in London, who has been a subscriber for years, writes: "The January number is a dandy. The other Toronto journals are 'not in it' with you. Good luck to you."

A DOCTOR in Kingston wrote us as follows on January 4th: "I have just received and glanced over this month's issue of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, and I feel as if I must tell you that a handsomer journal, a better edited or compiled journal, I have never received. I wish some other Canadian journals would take a few pointers from you."

The *Mail and Empire*, December 29th, 1900, says: "In the January issue of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY, the twentieth century number, appear nearly thirty pages of half-tone illustrations of the principal Canadian Hospitals in Toronto, Hamilton, London, Kingston, Woodstock, Ottawa and Montreal, as well as a number of colored illustrations, one showing the cycle of vaccination, typical vaccine vesicles, from inoculation to cicatrization, and a second in three colors, a reproduction from life, showing the development of the diphtheritic membrane and its disappearance under the influence of antitoxin. Altogether, it is a number interesting to laymen, as well as those in the profession."

The *World*, December 29th, 1900, says: "Certainly one of the most attractive medical journals which we have ever seen is the January issue, just to hand, of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY. It contains between thirty and forty half-tone illustrations of the various hospitals in this country,

something which has never before, to our knowledge, been done by the publishers of any other medical publication. The illustrations are splendid, and make the issue very attractive indeed. There also appear some three-color plates of medical subjects. The JOURNAL and its staff are deserving of no small amount of praise for getting out such a creditable number."

The *Globe*, December 29th, 1900, says : "The January issue of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY is a very artistic one. In it appears a number of illustrations of the largest hospitals in Canada, reproduced in half-tone. They are beautifully executed and the whole number is a credit to the publishers."

THE REMOTE RESULTS OF CUTTING OPERATIONS IN STRICTURE OF THE URETHRA.

THE very interesting subject of the remote effects of cutting operations in the treatment of stricture of the urethra was fully reported on by some of the most distinguished living urologists at the Thirteenth International Congress of Medicine, held at Paris last year. The principal reports were presented by Heresco of Bucharest and Albarran of Paris, there being really little difference between their opinions.

Heresco stated that "Surgeons nowadays understand better than their ancestors the anatomy, histology, and pathological histology of stricture, and guided by such knowledge the indications are observed with greater care, and the results of surgical interventions have become more effective."

Albarran followed the usual method of dividing urethral strictures into two groups, the inflammatory and the traumatic. Referring to uncomplicated inflammatory stricture, he said that, "viewed from the standpoint of frequency of relapse, the principal modes of treatment could be classified in the following order: Electrolysis, progressive dilatation, internal urethrotomy, external urethrotomy, resection and autoplasmic operations."

Electrolysis, done by the rapid method at one sitting, causes a relapse, occurring all the sooner in proportion to the shortness of time devoted to the subsequent dilatation of the stricture. The remote results of electrolysis, done by the slow method, appear

to be more satisfactory; but the reports of published cases did not enable Albarran to form a definite opinion on that question.

Progressive dilatation should be carried on methodically, until a No. 60 Benique can be passed. Except, however, in slight cases, permanent results will not be obtained, and successive periods of dilatation by the use of sounds will be required, if the normal diameter of the urethra is to be preserved. Internal urethrotomy can only be considered as the first stage of progressive dilatation. When multiple instead of single section of the stricture is practised, the results are better; but, in any case, they will not be durable, and must be followed by subsequent dilatation to maintain the urethra at a normal size. A relapse is to be expected after progressive dilatation, just the same as after internal urethrotomy.

External urethrotomy gives results of a character superior to those obtained by the two preceding methods; but it is only suited to strictures of limited size. Occasionally patients remain well after an external urethrotomy, without taking subsequent precautions; but such instances are rare, and, as a rule, a relapse can only be avoided by the regular practice of progressive dilatation after the operation.

In inflammatory strictures limited to the perineo-scrotal region, resection of the urethra yields results comparable or superior to those obtained by external urethrotomy. When the stricture can be totally removed a cure may be expected without subsequent dilatation. In the penile region, however, extensive resection is likely to cause incurvation of the penis. In inflammatory stricture, complicated with tumors and urinary fistulae, progressive dilatation and internal urethrotomy will not suffice. External urethrotomy or, preferably, a partial or total resection of the affected part of the urethra, yields the best results.

Autoplastic operations to restore the urethra have been practised in a few rare cases, which, however, have very little analogy to those for which the above prescribed operations are usually performed.

In traumatic stricture, progressive dilatation will not ensure a cure of any duration. In spite of repeated sections, internal urethrotomy is equally useless, and relapses occur rapidly. The results are better after external urethrotomy; but the patient is exposed to a relapse in spite of regular attention after the opera-

tion. Resection of the urethra is the chosen operation in traumatic stricture. It is more successful in such cases than in inflammatory strictures, and may result in a complete cure.

J. J. C.

**DR. GEO. M. GOULD'S TEMPORARY RETIREMENT FROM
MEDICAL JOURNALISM.**

It is a matter of the greatest surprise, and one certainly of regret, that our friend Dr. George M. Gould has given up the editorship of the *Philadelphia Medical Journal*. Dr. Gould has been looked upon by all as one of the most able and scholarly medical editors on this continent, and any reader of his journal will admit that for choiceness of material presented from week to week, and beauty of language employed in his editorials, Dr. Gould has won for himself in both the United States and Canada a large army of friends and admirers. Dr. Gould inaugurated the *Philadelphia Medical Journal* three years ago, and has followed its career till the present with more than a fatherly interest. He was looked upon as "the man at the front," and "the man with the gun," as far as the *Philadelphia Medical Journal* was concerned, and any separation of his name from that of the *Journal* appears passing strange. We are not conversant with the arguments on both sides of this matter, and though the *Philadelphia Medical Journal* Publishing Co. may have been within their rights when they discharged Dr. Gould, yet it would have put them in a much better light before the medical public had they given their editor English fair play, and allowed him to bid adieu to his readers by publishing his editorial matter in the issue previous to his departure, and not substituted matter proceeding from the pen of another, still allowing Dr. Gould's name as editor to appear at the top of the page.

It is true that Dr. Gould has in some instances taken somewhat extreme views on certain points, but there is not a man who can say that he has not published a medical journal that has been a credit to him as a writer and to the profession of whom he is so prominent and highly esteemed a member. We trust that the Doctor's new venture in the shape of the journal he intends to publish, commencing this month, will be a success.

W. A. Y.

EDITORIAL NOTES.

Toronto Orthopedic Hospital.—By reference to the second annual report of the Toronto Orthopedic Hospital, we notice that this excellent institution, which is exclusively devoted to the treatment of the lame, crippled and deformed, is meeting with gratifying success. The report says: "An analysis of the books shows that during the year just completed the aggregate number of days spent in hospital by all the patients admitted, was 5,582, of which 2,146 days are to be credited to the accounts of patients who received their professional treatment free. That is to say, over thirty-eight per cent. of the work of the hospital has been done for a class of patients who were unable to pay for their treatment. Of this class, some received free board and nursing, in addition to free treatment, while some paid part and others the whole cost of board and nursing. In view of the fact that the hospital is so largely dependent for meeting its running expenses on the fees paid by private and semi-private patients for their maintenance and nursing while undergoing treatment, the trustees have reason to feel gratified that so large a measure of charitable work has been accomplished in the institution during the year." It is to be hoped that the Toronto Orthopedic Hospital will continue to receive from the public the support to which it is justly entitled.

Compulsory Notification of Tuberculosis.—The important question of the notification of tuberculosis was discussed at the Tenth International Congress of Hygiene and Demography, held at Paris, August, 1900, and the pros and cons were fully set forth. At the end of the discussion, the following conclusions were adopted by the Congress: (1) The declaration of transmissible diseases should be obligatory in all countries. The list of diseases to be reported should be decided by the sanitary authorities. The report should be made by the head of the family and by the physician. (2) Open tuberculosis, namely, cases where lung tissue has broken down, so that tubercle bacilli are contained in the expectoration, should be included in the list of diseases required to be reported.

Dried Anti-Diphtheritic Serum.—We have not learned that dried anti-diphtheritic serum has been placed on the market in

America; but it appears to be used in France. Now that the treatment of diphtheria by serum has passed beyond the experimental stage, and is considered indispensable, the price of the article is of some importance to the physician and his patrons. Dr. Martin, who brought this question up at the Eleventh International Congress of Pharmacy (Paris), stated that dried serum is not as active as the liquid variety; but that pharmacists who do not retail much serum would find that the dried variety, which is unchangeable and preserves its properties indefinitely, would prove useful in the sense that it could be employed at the beginning of a case of diphtheria, allowing the practitioner time to get liquid serum for the remainder of the treatment.

Proposed Bill for the Treatment of Inebriates.—The attention of our readers is directed to an abstract of the proposed bill for the treatment of inebriates, and also excerpts from the report of an advisory committee, appointed in 1899 by the Mayor of Boston, on the penal aspects of drunkenness, all of which appear at p. 108, Department of Public Health and Hygiene. We sincerely hope that something will be done by our legislators for the reclamation of drunkards. If it is right to spend Provincial money in helping to obtain the cure of tubercular patients, for whose illness the State cannot be held responsible, it is only honest to apply a percentage of the fees derived by the Province from license fees in assisting drunkards to improve their health and restore their moral stamina.

Significance of Iritis in Syphilis.—Trousseau thinks that the appearance of iritis in a case of syphilis indicates a severe form of the disease, and a profound infection of the organism, whether it assumes the form of iritis, irido-choroiditis, retinitis, or optic neuritis. In mild syphilis, ocular diseases are only occasionally observed, and are of short duration, yielding readily to treatment. Such is also the case in hereditary syphilis, in which the virus, being an attenuated one, does not beget ocular disease. In Trousseau's opinion, all cases of syphilitic iritis should be carefully watched and energetically treated.

Local Treatment of Strangulated Hernia.—The treatment of strangulated hernia by local applications, prior to a cutting per-

ation, is worthy of note. Recently an American surgeon reported a case of this nature, in which the patient, a negro, accustomed to the use of tobacco, was treated by the application of a strong tobacco poultice to the affected inguinal region. After a short time the patient evinced signs of considerable systemic prostration; but the hernia was reduced quite easily. A French surgeon (Fiessinger) reported to the Paris Academy of Medicine (October 30th, 1900) a series of cases, inguinal, crural and umbilical, which were reduced by the prolonged application (half an hour to three hours) of ether compresses. It is claimed that the refrigeration produced by compresses of ether, is greater than that which follows the application of an ice-bag.

PERSONALS.

DR. THEO. COLEMAN has removed to Copper Cliff, near Sudbury.

DR. W. A. YOUNG went a week last month in Chicago and St. Louis, Mo.

CONGRATULATIONS to Dr. H. B. Anderson, of Toronto, upon his recent engagement.

DR. JAS. M. MACCALLUM spent two weeks of last month with his brother in Oregon.

DR. CRAWFORD SCADDING spent Christmas in Chicago, but was only absent a few days.

DR. T. B. WHEELER, of Montreal, died suddenly in New York City on the 12th ultimo.

DR. L. H. WARNER, of Brooklyn, N.Y., has removed to 106th Street, New York City.

DR. C. W. PURDY (Queen's Univ., 1846), who has for some years been practising in Chicago, died in that city on January 19th.

CONGRATULATIONS to Mr. E. G. Swift, the popular manager of Parke, Davis & Co., at Walkerville, on his election as Mayor of the town.

DR. T. B. RICHARDSON, of Carlton Street, actually assumed the awful responsibilities of paterdom on the 12th of January. Congratulations, old boy.

DR. EZRA H. STAFFORD has been spending the past two months in Jamaica, and writes us that he has been having a most enjoyable time, getting better looking every day, and keeping strictly sober.

WE are glad to announce that Dr. Adam Wright is now completely recovered from his recent illness.

DR. W. B. THISTLE has been appointed Associate Professor of Clinical Medicine in the University of Toronto.

DR. GEO. R. McDONAGH, 140 Carlton Street, Toronto, desires to announce to the profession that he will be absent from the city from February 1st to April 1st.

DR. J. F. W. ROSS left on Friday, January 18th, for Nassau, in the West India Islands. He has gone to accompany Mr. Geo. Gooderham, and will be away until March.

DR. EDWARD PLAYTER, of Toronto, won his appeal last month in the matter of the conviction registered against him some time ago in reference to Highfields Sanitarium for Consumptives.

DR. PERRY G. GOLDSMITH, of Belleville, leaves early in February to spend the next six months in London and Germany studying eye, ear and throat work. We wish him heartily every success.

FOR SALE.—Doctor's residence and good-will, of practice, in a flourishing incorporated village in Ontario, with good surrounding country. First class opening. Apply to D. T. Symons, 18 King Street West, Toronto.

THE entire profession will sympathize with Dr. Chestnut, of Winnipeg, who was suddenly stricken with blindness on January 20th. Dr. Chestnut was the well-known Superintendent of Winnipeg General Hospital.

DR. CHOWN, of Winnipeg, President-elect of the Canadian Medical Association, which meets in Winnipeg, August 28-31, 1901, issued on January 1st to his friends a most artistic card, conveying New Year's greetings.

WE take this opportunity of congratulating Mr. W. Lloyd Wood, of Toronto, upon his acquiring the agency for the U. S. (in addition to that for Canada), for the well-known firm, Allen & Hanbury, Ltd., of London, Eng. Mr. Wood is most favorably known to the medical profession of this country, as not only a gentleman, but a keen and successful business man, and all wish him increased success.

LESTER KELLER NOT DEAD YET.—Our friend Dr. Lester Keller, of Ironton, Ohio, is in fact very much alive. We congratulate him heartily upon his victory in the matter of the recent small-pox outbreak in his town. In spite of all protests, he adhered to his decision that the case was one of genuine variola, and the Health Board have at last backed him up. Is he tickled? Well, I should smile! In fact, they tell us that Lester now walks as if on eggs.

Obituary.

DAVID NELLES, M.D.

DR. DAVID A. NELLES, for eighteen years a highly-respected and beloved practitioner of Thornhill, passed away at Grace Hospital on Saturday afternoon, December 29th. Two years ago Dr. Nelles fell from a tree, and although nothing particular was thought of it at the time, his death is indirectly attributed to the accident. Deceased was taken ill about five weeks before his death and a week later was removed to the hospital. He was born at Waterford 45 years ago. He leaves a widow, a daughter of Mr. Berkeley Smith, bursar of Toronto University, and two children, a son and a daughter. The funeral was largely attended. Deceased was a grandson of the late Dr. Duncombe, who for sixty years practised in the Norfolk County district. Dr. Nelles' life was marked by many charitable acts, and he will be greatly missed by a large section of York County.

RICHARD THORBURN, M.D.

THE death took place on December 14th, at Grace Hospital. of Dr. Richard Thorburn, who for about fifteen years has carried on his practice at Colborne, Ont., where he was widely known and esteemed. The deceased was the youngest member of the family of the late David Thorburn, formerly M.P. for Lincoln, in the old Provincial Assembly. Dr. Thorburn was born in Queenston, Ont., about 1839, and was educated at first at Queenston, afterwards at Toronto University, finishing his course at Oxford, Eng. Entering the medical profession, he practised for several years in Queenston, and some fifteen years since removed to Colborne, where he had continued to reside until ten days since, when, being taken ill, he was removed to Grace Hospital for better treatment, where he expired. The deceased was a brother of Dr. James Thorburn, of Bloor Street, and of Mrs. Symons, of 68 Avenue

Road. In religion the late doctor was a Presbyterian, and in politics a Reformer. He died unmarried.

T. M. FENWICK, M.D.

DR. T. M. FENWICK, of Kingston, died on January 3rd from the effects of blood poisoning. Two months or more ago he pared a corn, blood poisoning following, and finally gangrene. It was decided to amputate the left leg on Monday, the 31st December, but it was found the right leg had also become affected. The deceased was a native of Kingston, aged 57, and had practised his profession there for 36 years. He was one of the founders of the now defunct Kingston Ladies' Medical College, and a lecturer in Queen's Medical College. He was twice married, his second wife and one daughter surviving, together with four brothers and two sisters.

DR. RYALL, of Hamilton, died last week.

THE "MEDICO-LEGAL JOURNAL," NEW YORK.—We cannot but compliment our friend, Dr. Clark Bell, editor of the *Medico-Legal Journal*, New York, on the excellence and merit of his last number. It is not necessary for us to say that Dr. Bell has for years past been looked upon as the exponent in America of matters medico-legal. His opinion is among the first in the land, and with his keen knowledge of such matters, it is little wonder that the journal he publishes has attained to the position it now occupies. Every issue is worth binding.

THE annual dinner tendered by Dr. Cassidy and Dr. Young to the members of the staff of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY was held in the Blue Room, Temple Cafe, on January the third. The attendance was large, embracing a few guests of honor, all the members of the staff, with the exception of three residing at a long distance from Toronto, and two from illness. An orchestra provided pleasant music, and many bright and appropriate toasts were proposed and heartily responded to. Prosperity and harmony in the past, and success and united effort for the future, was the keynote of expression struck by all, which augurs good luck indeed for 1901.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

COMPOSITION OF CANADIAN BEERS.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—Replying to your favor of yesterday, I would say that the quotation from Bulletin No. 52 still holds good. But it would not be correct to say that Canadian beers, etc., are “without exception,” made from malt, hops, yeast and water. Last year nearly sixty million pounds of malt were used, and only 9,351 pounds of other substances (cerealine and sugar), the use of which was in British Columbia only, and duly declared. Reciprocating your good wishes, I remain,

Yours truly,

THOMAS MACFARLANE.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—Replying to your letter of 31st ult., brewers in both Great Britain and the United States, in order to cheapen their product, now use various substances for barley malt, such as raw grain, corn, rice, glucose, and other similar substances. I do not think these articles, if properly handled, will make a deleterious article, and I have no doubt, taking everything into consideration, that ale and porter are the most wholesome of beverages in general use. I think the trouble in England lately caused by poisonous beer was not the fault of the brewers, but of those parties who supplied the glucose or other substitutes. There is no doubt that Canadian ale and porter are the most wholesome in the world, as the excise regulations in this country are such that it would not pay a brewer to use these substitutes. The brewers in Canada are charged a duty of 1 1-2 cts. per pound for every pound of malt they use, but in case they wish to use a portion of raw grain, glucose or other substitutes, they must pay not only the duty on the malt, but so much a gallon besides. I forget the amount, but you can find this out by inquiring at Toronto Excise Office. How-

ever, it makes the duty so high that it does not pay to use anything but malt. Of course a brewer can use malt made from any grain, such as wheat, oats, corn, etc., but in my opinion nothing makes as good and wholesome and palatable an article as *barley* malt.

At all events, I have always been most particular to use nothing that could be injurious, as I am aware that very many physicians are constantly recommending my ale and porter for invalids and others requiring an article of this kind. So that I have always procured the best barley and hops that can be got, and shall always do so. And I have very pure spring water from an artesian well on my premises.

Some in Canada have adopted a carbonating process, that is, the ale is charged with carbonic acid gas artificially, instead of allowing it to mature in the natural way, when the gas which gives it the sparkling and creamy condition would be formed by the secondary fermentation that goes on in the bottles or in the cask of draught ale. Brewers who adopt this plan do not want to wait till their ale matures *naturally*, but wish to send it out as soon as made. I am strongly in favor of maturing the goods slowly and naturally, giving it proper age and having fermentations wholesome and sound.

Yours truly,

JOHN LABATT.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—In reply to your inquiry *re* Canadian beer, it affords me much pleasure to be able to state that in the manufacture of ale, porter and lager in Canada the only ingredients used are malt, hops, yeast and water. Our excise laws are very stringent, and I feel assured that they are rigidly adhered to.

Our entire brewing operations from the time the barley enters the brewery to be malted, until the product is ready for the market, are under the direct supervision of the excise officer, who holds the keys of the bonded warehouse, and weighs out the malt for brewing as required. He, of course, knows how much a given quantity of malt should produce, and any infraction of the law is almost unknown. The hops used are Canadian, Oregon, British Columbia, English and Bavarian. There is no inducement to use any substitute for these.

I beg to state that with the exception of Germany, no country in the world is turning out as pure malt beverages as Canada.

The system of brewing in England and the United States is altogether different to ours. Any substitute for malt, such as sugar, corn, cerealine, glucose, etc., can be used in these countries, but our system in Canada is far preferable.

In England, I know as a positive fact that what goes by the name of "running" ales, if not consumed inside of two to three weeks from date of brewing, will turn sour, and be unfit for use, while in Canada it takes months for beer to get in condition. Most Canadian brewers are now brewing "stock" ales, porter and lager for next summer's consumption.

Yours truly,

E. O'KEEFE.

PROPOSED LEGISLATION TO PREVENT DRUNKENNESS.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :

DEAR SIR,—I beg to enclose (a) an abstract of the proposed bill for the treatment of inebriates, and (b) excerpts from the report of an Advisory Committee appointed in 1899 by the Mayor of Boston on the Penal Aspects of Drunkenness. If you find that you can make room for one or both in the JOURNAL I think it will serve a good purpose. Allow me to remind you that the Ontario Government has practically declined to establish a provincial institution for this class on the grounds of the large expense involved. As there appeared to be no hope of any change in the policy of the Government in this regard, this bill was drawn up trusting that its economical aspects would commend it to the favorable consideration of the Government. Its aim is to combine maximum efficiency with minimum expense, and it has been endorsed by the Ontario Medical Association and by the Toronto Medical Society.

Yours truly,

A. M. ROSEBRUGH, *Secy.*

MARK TWAIN thus salutes the twentieth century: "I bring you the stately matron named Christendom, returning bedraggled, besmirched and dishonored from pirate raids in Kiaochow, Manchuria, South Africa and the Philippines, with her soul full of meanness, her pocket full of boodle, and her mouth full of pious hypocrisies. Give her soap and a towel, but hide the looking-glass."

The Physician's Library.

BOOK REVIEWS.

Ian Hamilton's March. By WINSTON SPENCER CHURCHILL, M.P. Author of "London to Ladysmith via Pretoria," "The River War," "Story of the Malakand Police Force," etc., etc. Toronto: The Copp, Clark Company, Limited. 1900. Price, \$1.50.

This book is a continuation of Mr. Churchill's letters from the seat of war in South Africa, and is confined to General Ian Hamilton's column on the right flank of the main army of Lord Roberts from Bloemfontein to Pretoria. He makes an occasional diversion in the narrative and gives an account of the siege of Wepener and its successful defence by Brabant's Colonial Brigade, which he characterizes as a very honorable episode and particularly in the records of the Cape Mounted Rifles, who lost nearly a quarter of their strength. This book also contains "Extracts from the Journal of Lieutenant H. Frankland, Royal Dublin Fusiliers," lately prisoner of war at Pretoria.

Lieutenant Frankland was captured by the Boers when the armored train was destroyed at Chieveley in Natal, on the 15th of November, 1899. He was carried as a prisoner to Pretoria, where he arrived on the 19th of November and where he remained until the 5th of June, 1900, when Pretoria fell and the greater part of the prisoners were set free. In his diary of May 25th, he has the following note: "In our little enclosure we have quite a representative British Empire—English, Scotch and Irish soldiers, Colonials, South Africans, Australians and civilians, and indeed, we only require a Canadian to complete the list." So, you see, our boys at least kept free of the Pretoria "Round up," although some of them were captured later on and set free again.

Mr. Churchill has given us a fascinating description of General Hamilton's march and one that is as interesting as any similar work I have ever read.

A. J. H.

Sexual Debility in Man. By F. R. STURGIS, M.D., formerly Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York; sometime Visiting Surgeon to the Venereal Division of the City (Charity) Hospital, Blackwell's Island; Member of the American Association of Genito-Urinary Surgeons, etc. Author of "Students' Manual of Venereal Diseases"; one of the authors of "A System of Legal Medicine." New York: E. B. Treat & Co., 241 West 23rd Street. Price, \$3.00. 1900.

Dr. F. R. Sturgis, of New York, has for years been looked upon as an authority on matters of this kind, and anything from his pen has always commanded respect. It is, therefore, not to be wondered at that a work of about 400 pages on the subject, claiming F. R. Sturgis as author, will meet with very considerable demand. One of the principal points of value in this book is that the cases cited are those which have come under the writer's own observation, so that the work as a whole is thoroughly practical. In some chapters, principally those entitled "Masturbation and Onanism," Dr. Sturgis does not hesitate to express his views, which he admits in many cases are at variance with those of even older writers. If other writers would but follow his example and give medical readers the advantage of their own practical experi-

ence, there would be in many instances much greater inducement to purchase. Dr. Sturgis states that it is his belief that masturbating lunatics should be castrated. He also adds that he does not believe that it is necessary, in the treatment of masturbators, to use extreme measures and picture to them asylums filled with cases similar to that of their patient in order to induce them to give up the habit, though he would advise in every instance the pointing out of the great danger incurred.

The Present Position of the Treatment of Simple Fractures of the Limbs. By WM. H. BENNETT, F.R.C.S., Senior Surgeon to St. George's Hospital, London, etc. Together with a summary of the opinions and practice of about 300 surgeons. London, New York and Bombay: Longmans, Green & Co., 39 Paternoster Row. Canadian Agents, J. A. Carveth & Co., Toronto. Price, 75 cents.

This little book is the address delivered in opening a discussion at the British Medical Association at Ipswich last year. Considerable stress is laid upon the advantages of early passive motion, and for this reason it seems desirable to do away with such immovable splints as plaster-of-Paris, etc., and to use instead some movable splints that may be removed from day to day and permit of passive motion. The author's investigations go to show that after such treatment period of recovery is greatly shortened.

As to the open method of treating fractures, the conclusion is reached "that although in the hands of certain operators the method is reported to have given results which are better in many cases than could otherwise be obtained, with the general body of practitioners it is not suited for anything like a routine treatment, and should be reserved for special cases which are unmanageable by other means." With this view the writer heartily concurs.

F. N. G. S.

A Text-Book upon the Pathogenic Bacteria, for Students of Medicine and Physicians. By JOSEPH MCFARLAND, M.D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Medico-Chirurgical Hospital, Philadelphia; Fellow of the College of Physicians of Philadelphia, etc. With 142 illustrations. Third Edition, Revised and Enlarged. Philadelphia: W. B. Saunders & Company. 1900.

This book with its precise and lucid management of the subject, its avoidance of much unnecessary detail, is intended for the student and general practitioner, and as such is a decided credit to the author.

We find the author keeping to his original idea in limiting this work as much as possible to the *Pathogenic Bacteria*, not enlarging upon parasitology, and only departing from this rule when absolutely necessary for purposes of differentiation. The chapters on infection and immunity have been entirely rewritten and contain much new subject-matter. In the sections of tuberculosis, diphtheria, tetanus, plague where advances have been most rapid, we note the principal changes, bringing these subjects well up to date.

Many valuable suggestions and hints are to be found in the departments of technic, which aid the student in working out a bacteriological history of his cases.

The illustrations are principally good reproductions from the standard works.

Satis verbum.

W. H. P.

The Diseases of the Tongue. By HENRY T. BUTLIN and WALTER G. SPENCER. Second edition. London: Cassels & Co., 1900. Canadian Agents, J. A. Carveth & Co., Toronto.

When the first edition of Butlin on the Tongue appeared in 1885, it took its place at once as the most comprehensive and most authoritative treatise upon this subject in the English language, and ever since then in difficult or complicated cases it has been the standard work of reference. Surgeons who were desirous of basing safe practice upon sound pathology in dealing with the

diseases of this organ, have been compelled to resort to this work and have found in it a very storehouse of the best surgical teaching.

A rapid review of this new work by one who had become very familiar with the first edition has led to the conclusion that in every respect it is an improvement upon its predecessor. Mr. Spencer's work, particularly that part which deals with the anatomy of the tongue and the latest views regarding the pathology of its diseases, is of a very high order, and the extended experience and results gained by Mr. Butlin during the last fifteen years in the operative treatment of cancerous diseases of the tongue are particularly useful sections.

The work is illustrated by a large number of colored photographs and cuts, and is clearly printed on excellent paper. It can be commended to all who have to deal with the affections of this organ, without reservation, as being the best monograph extant.

N. A. P.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College Hospital, Paddington Green, etc., and F. F. BURCHARD, M.D. and M.S.(Lond.), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc. In six parts. Part IV., The Treatment of Surgical Affections of the Joints (including Excisions) and the Spine. London and Bombay: Longmans, Green & Co., 39 Paternoster Row. Canadian Agents, J. A. Carveth & Co., Toronto, Canada. 1900.

Volume IV. of this manual has just come to hand. We find the same lines followed as in the previous volumes, viz., sufficient causation and pathology for the ordinary practitioner, and the treatments which have proved most useful in the experience of the authors. We consider this a good feature of the manual. It keeps the volumes to a convenient size and gives the busy doctor a sufficient variety in treatment with the least possible amount of reading, and the assurance that all the methods given are reliable and up to date. Volume IV. contains 360 pages and 138 illustrations. We prize the book very much, and can with confidence recommend it to our friends.

w. j. w.

A Text-book of Histology, including Microscopic Technic. By BÖHM and von DAVIDOFF. Edited with additions by G. CARL HUBER, M.D. Authorized translation from the second German edition by Hubert H. Cushing, M.D. Philadelphia: W. B. Saunders & Company. Toronto: J. A. Carveth & Co. Price, \$3.50 net.

The last few years have produced a number of new text-books of histology, on account of the very rapid strides the science has made since the early eighties, but we doubt if any of them will receive a better reception than this work. Those who knew the German edition looked forward to its appearance in English because of the increased field of usefulness, especially among students.

The publishers have, however, distinctly added to its value by placing in the hands of Dr. Huber, of Ann Arbor, the editing of the German text. The result has been that considerable new matter has been added, which has been drawn from the editor's researches upon the nervous system, and numerous new illustrations have been added from the same source. This work can be heartily recommended.

J. J. M.

The Essentials of Practical Bacteriology. An elementary laboratory book for students and practitioners. By H. J. CURRIS, B.S. and M.D.(Lond.), F.R.C.S., late Surgical Registrar, University College Hospital, formerly assistant to the Professor of Pathology, University College, London. Longmans, Green & Co., 39 Paternoster Row, London, New York and Bombay, 1900. Canadian Agents, J. A. Carveth & Co., Toronto. Price, \$2.25.

This work will be found to be quite an aid to bacteriologists in their work, as, though somewhat elementary in many places, it is written in a clear,

succinct manner, and contains material which is valuable from the clinical standpoint. The book is divided into two parts, the first dealing with the manufacture of the nutrient media and general technique, and the second with non-pathogenic and pathogenic organisms; *e.g.*, chromogenic bacteria, yeasts, moulds, the organisms of pneumonia, gonorrhoea, etc., anthrax, glanders, typhoid, Malta and yellow fevers, cholera, malaria, etc. By the student Dr. Curtis' book will be found very acceptable. It is well illustrated and forms interesting reading.

A Kentucky Cardinal and Aftermath. By JAMES LANE ALLEN, author of "The Reign of Law," "The Choir Invisible," etc. Toronto: The Copp, Clark Company, Limited. Cloth.

A beautiful edition, bound in red and gold, finely illustrated. Perhaps some wise ones may have said that the life and tragic death of the Kentucky Cardinal was a poor theme upon which to hang a tale. Or others may have asked in the words of the old rhyme—

"Has inspiration dropped to zero,
When such material makes a hero?"

Around the Kentucky Cardinal, however, James Lane Allen has woven a tender love story. In its conclusion, "The Aftermath," the man story-teller has done an unusual thing—he has clothed the dark valley of suffering unto death, not with entire silence as almost always seems best, but with dignity, in a few simple words. In "Aftermath," has he not taken the liberty of stepping in "where angels fear to tread"?

The Hosts of the Lord. By MRS. FLORA ANNIE STEEL, authoress of "On the Face of the Waters," etc. Toronto: The Copp, Clark Company, Limited. Cloth.

A tale of life in India, full of incident and action, almost to the bewilderment of the reader. Not so thrilling, certainly, as "On the Face of the Waters," but still powerfully told. The different characters are not so distinctively drawn as they might be, with the exception of two types of womanhood. Nowadays these strange tales are appreciated best on the stage, and this story seems to call for "an atmosphere"—the prelude of music, the dim light of the theatre, the hush, the rising of the curtain, and the men and women in voice and gesture living the characters. After the story is told the scenic picture of the faint day dawn, "clear and still, shedding its light over the valleys on valleys, the hills on hills, which lay bathed in light—between him and the 'Cradle of the Gods.'" W. A. Y.

Golden Rules of Skin Practice. By DAVID WALSH, M.D. (Edin.), Honorary Physician Western Skin Hospital, London, W. Author of "The Röntgen Rays in Medical Work," etc. Golden Rule Series No. viii. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited.

This is a handy little book of 102 pages, which may be called a vest pocket remembrance. The subject of skin diseases has evidently been well conned by the author, and his utterances are none the less weighty because they are condensed. Several useful formulæ are to be found scattered through its pages.

J. J. C.

Hugh Wynne, Free Quaker. Sometime Brevet Lieutenant-Colonel on the staff of His Excellency General Washington. By S. WEIR MITCHELL, M.D. Toronto: The Copp, Clark Company, Limited.

Weir Mitchell has contributed another strong story, this time a history of the difficulties that led up to the War of Independence, of the war itself and of the final Declaration of Independence. The story is a good one, full of thought,

good ethics and with a high moral tone throughout. There is enough love running through the book to make it palatable to the fair sex and not distasteful to the sterner sex. We can safely commend the book for your perusal.

F. N. G. S.

Visiting List for 1901. P. Blakiston's Son & Co., Philadelphia, Pa.

Once more Blakiston's Visiting List for another year comes to hand. It is almost too well known to require more than passing comment. With the present issue the Visiting List enters upon the fiftieth year of its existence and ever since its first issue has steadily improved. This year's proves no exception to that rule, and the Doctor who desires a complete up-to-date pocket visiting list with space for memoranda, and which will comprise up to 100 patients per week, had better purchase Blakiston's.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

American Text-Book of Physiology. Saunders & Co.

Grandin and Jarman's Practical Obstetrics. Third edition. The F. A. Davis Co.

Wainwright's Urinary Diagnosis. By J. W. Wainwright, M.D. Chicago: G. P. Engelhard & Co. 1900.

A Text-Book of Pharmacology and Therapeutics; or, The Action of Drugs in Health and Disease. By Arthur R. Cushing, M.A., M.D. Lea Bros & Co.

Diseases of the Heart: Their Diagnosis and Treatment. By Albert Abrams, A.M., M.D., Heidelberg, F.R.M.S. Chicago: G. P. Engelhard & Co. 1900.

Proceedings of the fifteenth annual meeting of the Conference of State and Provincial Boards of Health of North America. Atlantic City, June 1st and 2nd, 1900. Providence: Snow & Farnham, printers. 1900.

Studies in the Psychology of Sex: The Evolution of Modesty, the Phenomena of Sexual Periodicity, Auto-Erotism. By Havelock Ellis. 8vo. 275 pages. Philadelphia, New York, Chicago. F. A. Davis Company, publishers. 1901.

L'Alcool et L'Alcoolisme: Notions générales Toxicologie et Physiologie, Pathologie, Thérapeutique, Prophylaxie. By Triboulet et Mathieu. Vol. I., 8vo. 254 pages. Cartonné à l'Anglaise, 5 frs. Paris: G. Carré & C. Naud, éditeurs, 3 Rue Racine. 1900.

Toronto Orthopedic Hospital, devoted exclusively to the treatment of the lame, crippled and deformed. Second Annual Report, containing general information about the hospital and the school of massage. Address all communications to Toronto Orthopedic Hospital, 12 East Bloor Street, Toronto.

The following pamphlets have been received from John H. Musser M.D., Professor of Clinical Medicine, University of Pennsylvania: On the Use of Antitoxin in Diphtheria, with Special Reference to Small and Frequently Repeated Doses; Amyloid Disease of the Liver, with an Abnormally Enlarged Left Lobe; The Indications for the Use of Alcoholic Stimulants in Typhoid Fever; Cancer of the Common Bile Duct.

The following pamphlets have been received from Alfred Stengel, M.D., Philadelphia, Professor of Clinical Medicine, University of Pennsylvania: Acute Enlargement of the Thyroid Gland, with Report of Cases; The Immediate and Remote Effects of Athletics upon the Heart and Circulation; The Diagnosis of Chlorosis and Chloro-anemia; Aortic Regurgitation, with Remarks upon Flint's Murmur and Paroxysmal Sweating.